ATM Series DVR User's Manual

This manual is for H.264 ATM series DVR

All the operations in the user's manual are based on the 4-ch real-time D1 unit.

Table of Contents

Welcome

Thank you for purchasing our DVR!
This user's manual is designed to be a reference tool for the installation and operation of your system.
Here you can find information about this series DVR features and functions, as well as a detailed menu tree.
Before installation and operation please read the following safeguards and warnings carefully!

Important Safeguards and Warnings

1．Electrical safety

All installation and operation here should conform to local electrical safety codes.
We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.

2．Transportation security

Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.

3．Installation

Keep upwards. Handle with care.
Do not apply power to the DVR before completing installation.
Do not place objects on the DVR

4．Qualified engineers needed

All the examination and repair work should be done by the qualified service engineers.
We are not liable for any problems caused by unauthorized modifications or attempted repair.

5．Environment

The DVR should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.
Please keep sound ventilation.

6. Accessories

Be sure to use all the accessories recommended by manufacturer.
Please make sure to use the same battery model if possible. The improper battery use may result in fire, electrical shock or personal injury!
Before installation, please open the package and check all the components are included.
Contact your local retailer ASAP if something is missing in your package.

1 FEATURES AND SPECIFICATIONS

1.1 Overview

This series product is an excellent digital monitor product designed for security field. It adopts embedded Linux OS to maintain reliable operation. Popular H.264 compression algorithm and G.711 audio compression technology realize high quality, low bit stream. Unique frame by frame play function is suitable for detail analysis. It has various functions such as record, playback, monitor at the same time and can guarantee audio video synchronization. This series product has advanced technology and strong network data transmission function.

This series device adopts embedded design to achieve high security and reliability. It can work in the local end, and at the same time, when connecting it to the professional surveillance software (PSS), it can connect to security network to realize strong network and remote monitor function.

This series product can be widely used in various areas such as banking, telecommunication, electric power, interrogation, transportation, intelligent resident zone, factory, warehouse, resources, and water conservancy.

1.2 Features

This series product has the following features:

- **Real-time monitor**

It has analog output port, VGA port and HDMI port. You can use monitor or displayer to realize surveillance function.
System supports TV/VGA/HDMI/LCD (LCD output is for special series only) output at the same time.

- **Storage function**

HDD management adopts hibernation technology for non-working HDD. It is good for ventilation and lower power consumption and it is also good for HDD lifespan.
Special data format to guarantee data security and can avoid vicious data modification.

- **Compression format**

Support 4-channel audio and video. An independent hardware decodes the audio and video signal from each channel to maintain video and audio synchronization.

- **Backup function**

Support backup operation via USB port (such as flash disk, portable HDD, burner) and eSATA port.
Client-end user can download the file to local HDD to backup via network.

- **Record playback function**

Support each channel real-time record independently, and at the same time it can support search, forward play, network monitor, record search, download and etc.
Sort records by card number (Working with ATM communication)
Support various record modes.

Support specified digital zoom during one-channel full-screen playback.

- **Network operation**

Support network remote real-time monitor
Remote record search and real-time playback
Remote PTZ control.

- **Alarm activation function**

3-channel relay alarm outputs to realize alarm activation and on-site light control.
The alarm input port and output has the protection circuit to guarantee device safety.

- **Communication port**

RS485 port can realize alarm input and PTZ control.
RS232 port can connect to keyboard to realize central control, and can also connect to PC COM to upgrade system and realize maintenance, and matrix control. It can also be used to connect to the ATM and POS to send out or receive the card number protocol data.
One standard Ethernet port can realize network access function.

- **Intelligent operation**

Mouse operation function
In the menu, support copy and paste setup function

Slight function differences may be found due to different series.

1.3 Specifications

	Parameter	With LCD	Without LCD
System	Main Processor	High-performance industrial embedded micro controller	
	OS	Embedded LINUX	
	System Resources	Multiplex operations: Multiple-channel record, multiple-channel playback and network operation simultaneously	
	Interface	User-friendly graphical user interface	
	Input Devices	Front panel, USB mouse, remote control and special keyboard	
	Input Method	Arabic number, English character, donation and extension Chinese (optional)	
	Shortcut Function	Copy/paste operation, USB mouse right-key shortcut menu, double click USB mouse to switch screen.	
Compression Standard	Video Compression	H.264	
	Audio Compression	G.711A	
	Video Input	4-CH composite video input: (NTSC/PAL) BNC ($1.0VB_{P-P,B}75\Omega$)	

Video monitor	Video Output	1-ch PAL/NTSC, BNC (1.0VP- P, 75Ω) composite video signal output. 1-ch VGA output. 1-ch HDMI output. Front panel LCD output (for special series only) Support TV/VGA/HDMI/LCD (LCD output is form special series only) video output at the same time.
	Video Standard	PAL (625 line, 50f/s), NTSC (525 line, 60f/s)
	Record Speed	Real-time Mode: PAL 1f/s to 25f/s per channel and NTSC 1f/s to 30f/s per channel
	Video Partition	1/4 windows(Optional)
	Monitor Touring	Support monitor tour functions such as alarm, motion detection, and schedule auto control.
	Resolution (PAL/NTSC)	PAL/NTSC Real-time monitor： D1 704×576/704×480
		Playback： D1 704×576/704×480 , HD1 352x576/352x480, BCIF 720x288/720x240, CIF 352×288/ 352×240 , QCIF 176×144/176×120
		Support dual streams: extra stream resolution CIF 352×288/ 352×240, QCIF 176×144/176×120
	Image Quality	6-level image quality (Adjustable)
	Privacy mask	Support one privacy mask of user-defined size in full screen. Support max 4 zones.
	Image Information	Channel information, time information and privacy mask zone.
	TV Adjust	Adjust TV output zone suitable to anamorphic video.
	Channel Lock	Cover secret channel with black screen though system is encoding normally. Screen-lock function to prevent unauthorized user seeing secret video.
	Channel Information	Channel name, recording status, screen lock status, video loss status and motion detection status are shown on the bottom left of display screen.
	Color Configuration	Hue, brightness, contrast, saturation and gain setup for each channel.
Audio	Audio Input	4-ch 200-1000mv 10KΩ(BNC)
	Audio Output	1-ch audio output 200-3000mv 5KΩ(BNC)
	Bidirectional Audio	1-ch bidirectional talk input 200-3000mv 10KΩ（BNC） 1-ch bidirectional talk output 200-3000mv 5KΩ(BNC)
Hard disk	Hard Disk	4 built-in SATA port. Support 4 HDDs.
	Hard Disk Occupation	Audio：PCM 28.8MByte/h Video：56-900MByte/h
	HDD Management	Non-working HDD hibernation technology. It is good for ventilation and lower power consumption and it is also good for HDD lifespan.

Record and playback	Recording Mode	Manual recording, motion detection recording, schedule recording and alarm recording Priority: Manual recording> Card number record >alarm recording>motion detection recording>schedule recording.
	Recording Length	1 to 120 minutes single record duration (Default setup is 60 minutes)
	Playback Repeat Way	When hard disk is full, system can overwrite previous video file.
	Record Search	Various search engines such as time, type, channel, card number, transaction information.
	Playback Mode	Various fast play, slow play speeds, manual frame by frame playback and reverse play mode.
	Various File Switch Ways	Can switch to previous or next file or any file in current play list. Can switch to file on other channel of the same time. (If there is a file) Support file continuous play, when a file is end system auto plays the next file in the current channel
	Multi-channel Playback	4-channel playback simultaneously
	Window Zoom	Switch between small-window/self-adaptive screen/full screen when playback
	Partial Enlargement	When in one-window full-screen playback mode, you can select any zone to activate partial enlargement function.
Backup function	Backup Mode	HDD backup
		Support peripheral USB backup device. (Flash disk, portable disk, USB burner and etc.)
		Support peripheral eSATA backup device.
		Support network download and backup
Network Function	Network control	View monitor channel remotely.
		DVR configuration through client-end and web browser
		Upgrade via client or browser to realize remote maintenance.
		View alarm information such as external alarm, motion detection and video loss via client.
		Support network PTZ lens control
		File download backup and playback
		Multiple devices share information via corresponding software such as professional surveillance software (PSS)
		Duplex transparent COM
		Network alarm input and output
		Bidirectional talk.
Motion Detection and Alarm	Motion Detection	Zone setup: support 396((PAL 22×18, NTSC 22×15)) detection zones. Various sensitivity levels. Alarm can activate record or external alarm or screen message prompt.
	Video Loss	Alarm can activate external alarm or screen message prompt.
	External Alarm	Support record activation function or activate external alarm or screen message in specified period.
	Manual Alarm Control	Enable or disable alarm input channel Support analog alarm signal to specific alarm output channel.
	Alarm Input	6-ch alarm input（You can set normal open or normal close type to select the alarm type.）
	Alarm Output	3-channel relay output, including one controllable DC +12V output port.
	Alarm Relay	30VDC 2A，125VAC 1A（activation alarm）
Interface	USB Interface	2 USB 2.0 ports.

	Network connection	RJ45 10M/100M self-adaptable Ethernet port
	RS485	PTZ control port Support various PTZ control protocols.
	RS232	Ordinary COM (Debug),keyboard connection and transparent serial port(COM input and output via network)
	DC+12V	One controllable DC +12V of the alarm output, two normal DC +12V (each max current is 0.5A)
System Information	Hard Disk Information	Display HDD current status
	Data Stream Statistics	Data stream statistics for each channel (in wave mode)
	Log statistics	Backup to 1024 log files. Support various search engines such as time and type.
	Version	Display version information: channel amount, alarm input and output amount, system version and release date.
	On-line user	Display current on-line user
User Management	User Management	Multi-lever user management; various management modes Integrated management for local user, serial port user and network user. Configurable user power.
		Support user /group and its corresponding rights modification. No limit to the user or group amount.
	Password Authentication	Password modification Administrator can modify other user's password.
		Account lock strategy Five times login failure in thirty minutes may result in account lock.
Upgrade		Web browser, client-end and update tool.
Login, Logout and Shutdown		Password login protection to guarantee safety
		User-friendly interface when login. Provide the following options: Logout /shutdown/ restart.
		Right authentication when shut down to make sure only those proper people can turn off DVR
General Parameter	Power	220V+10% 50±2% Hz / 110V 60Hz
	Power Consumption	18-22 W (Exclude HDD)
	Working Temperature	0℃－＋55℃
	Working Humidity	10%－90%
	Air Pressure	86kpa－106kpa
	Dimension	Special ATM case. 200×130×320mm
	Weight	3.5-4.5KG (Exclude HDD)
	Installation Mode	Desktop/rack installation

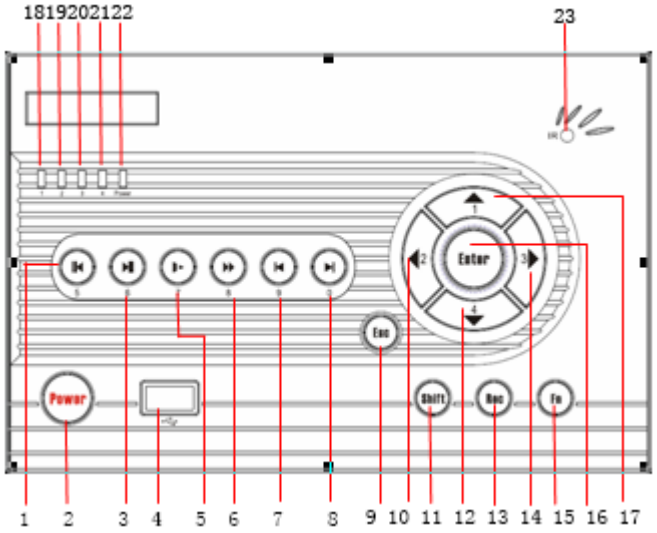
2 Overview and Controls

This section provides information about front panel and rear panel. When you install this series DVR for the first time, please refer to this part first.

2.1 Front Panel

These series DVR has two types of front panels. One is without the LCD and the other is with the LCD.

One series front panel (without the LCD) is shown as in Figure 2-1.



1. Reverse play 2. Power button
3. Play/Pause 4.USB port
5. Slow play 6. Fast play
7. Previous 8. Next
9. ESC 10.Left
11. Shift 12. Down
13. Record 14、Right
15. Fn 16.Enter
17. Up 18-21. Channel record indication light
22. Power indication light
23. IR remote control

Figure 2-1

SN	Name	Icon	Function	Remark
1	Reverse	II◀	In normal playback or pause mode, click this button to reverse playback	Input number 5
3	Play/Pause	▶II	In normal playback click this button to pause playback In pause mode, click this button to resume playback.	Input number 6
			In real-time monitor mode, click it to go to record search menu.	
5	Slow play	▶	Multiple slow play speeds or normal playback.	Input number 7
6	Fast play	▶▶	Various fast speeds and normal playback.	Input number 8
7	Play previous	I◀	In playback mode, playback the previous video In menu setup, click it to go to the previous item.	Input number 9
13	Play Next	▶I	In playback mode, playback the next video In menu setup, click it to go to the next item.	Input number 10
2	Power button	Power	Click it to boot up or shut down the device.	
4	USB		Connect to USB mouse or backup device.	
9	Cancel	ESC	Cancel	
			When playback, click it to restore real-time monitor mode	

11	Shift	Shift	Use the front panel to switch the input method. In text mode, click it to switch between numeral, English character(small/capitalized) and etc.	
13	Record	Rec	In real-time monitor mode, click it to go to the record setup.	
15	Assistant	Fn	One-window monitor mode, click this button to display assistant function: PTZ control and image color. In motion detection setup, working with Fn and direction keys to realize setup. Backspace function: in numeral control or text control, press it for 1.5 seconds to delete the previous character before the cursor. Realize other special functions.	
16	Enter	ENTER	Confirm current operation Go to the main menu	
10 12 14 17	Direction keys	▲▼	In real-time mode, click the left/right key to switch between one-window and multiple-window. Increase/decrease number Modify the setup PTZ control switch	▲ Input number 6 ▼ Input number 7
		◀▶	In one-window real-time monitor mode, click the up/down button to switch the monitor channel. PTZ control switch	◀ Input number 8 ▶ Input number 9

The other front panel (with the LCD) is shown as in Figure 2-2.

1. Record indication light
2. Power indication light
3. Remote receiver
4.Esc
5. Power
6. Direction buttons/1.2.3.4
7. Enter
8.Reverse/Pause/5
9. Play/Pause/6
10.Fn
11. Slow play/7
12.Fast forward/8
13. Shift
14. Previous /9
15. Next/0
16. Record
17. USB port

Figure 2-2

Please refer to the following sheet for more information.

S/N	Name	Icon	Function	Remark

14	Play previous	I◀	When playback, click this button to display previous file. In menu operation, go to previous menu item,.	In numeral input mode, click this button to input 9.
11	Slow play	▶	Various slow playback and normal playback. Speeds.	In numeral input mode, click this button to input 7.
9	Play/Pause	▶II	Play/Pause	In numeral input mode, click this button to input 6.
			In real-time monitor mode, click this button to go to search interface.	
12	Fast forward	▶▶	Various fast play and normal playback Speeds.	In numeral input mode, click this button to input 8.
13	Shift	Shift	Use the front panel to switch the input method.	
			In text mode, click it to switch between numeral, English character(small/capitalized) and etc.	
15	Play next	▶I	In playback mode, play the next file. In menu operation, go to the next menu item.	In numeral input mode, click this button to input 0.
16	Record	**REC**	Working with direction keys to enable/disable record	
10	Assistant	**Fn**	In 1-window display mode, click this button to go to assistant menu: PTZ control and	
			Working with direction keys to realize motion detection zone setup.	
			Clear function: Press Fn about 1.5 seconds to clear all contents in current text box.	
			In preview mode (There is no other menu available), press this button for 3 seconds to switch between TV/VGA. For HD1 series DVR, there are three modes: TV/VGA/VGA LCD (60Hz LCD output)	
			Working with other keys to realize special functions in some menu items.	
4	Cancel	ESC	Cancel	.
			In playback mode, click this button to go back to real-time monitor mode.	
7	Confirm	Enter	Confirm	
			Go to the main menu	

6	Direction keys	▲▼	In real-time monitor mode, click left/right direction keys to switch between one-window and multiple-windows.	In numeral input mode, Click ▲ to input 61
			Increase/decrease numeral	In numeral input mode, Click ▼ to input 4.
			Modify setup	
			Switch PTZ control	
		◄►	In 1-window real-time monitor mode, click up/down keys to switch monitor channel .	In numeral input mode, Click ◄ to input 2.
			Switch PTZ control	In numeral input mode, Click ► to input 3.

2.2 Rear Panel

2.2.1 Overview

Please refer to Figure 2-3 for real panel information.

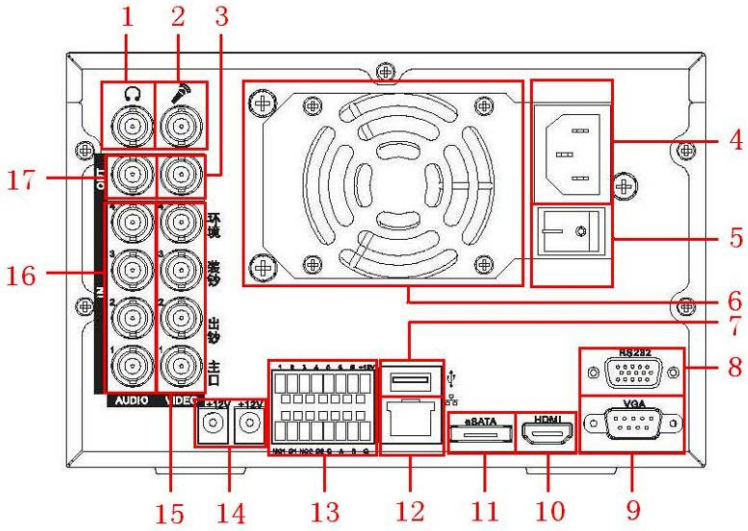


Figure 2-3

1	Bidirectional talk output	**2**	Bidirection talk input	**3**	Video output
4	Socket	**5**	Power button	**6**	Fan
7	USB port	**8**	RS232 port	**9**	VGA port
10	HDMI port	**11**	eSATA port	**12**	Network port (RJ45)

13	ALARM-RS485	**14**	+12V output	**15**	Video Input
16	Audio input	**17**	Audio output		

2.2.2 Connection Sample

Here is a connection sample for your reference. See Figure 2-4.

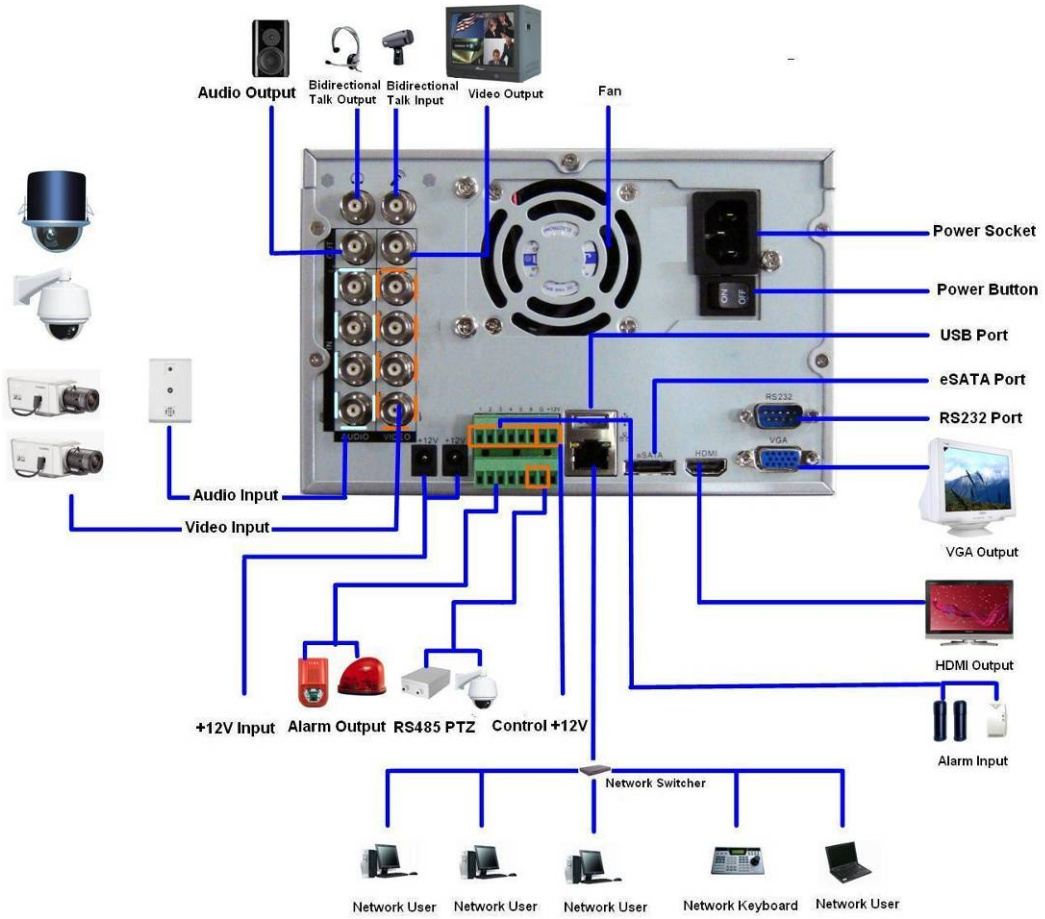


Figure 2-4

2.3 Remote Control

The remote control interface is shown as in Figure 2-5.

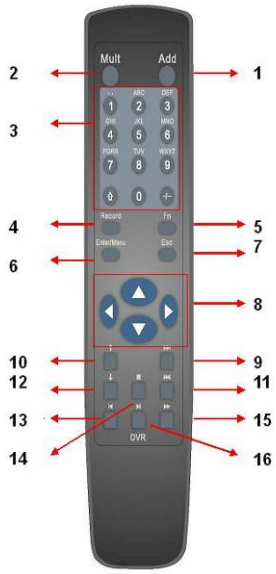


Figure 2-5

Serial Number	Name	Function
1	Address	Click it to input device serial number, so that you can control it.
2	Multiple-window switch	Please refer to the multiple-window switch button in the front panel (MULT)
3	0-9 number key	Input password, channel or switch channel. Shift is the button to switch the input method.
4	Record	Please refer to the record in the front panel.
5	Auxiliary key	Please refer to the Fn button in the front panel.
6	Confirm /menu key	Please refer to the ENTER button in the front panel.
7	Cancel	Please refer to the ESC button in the front panel.
8	Direction key	Please refer to the direction buttons in the front panel.
9	forward	Various forward speeds and normal speed playback.
10	Previous	Please refer to the previous in the front panel.
11	Backward	Various backward speeds and normal speed playback.
12	Stop	Please refer to the stop button in the front panel.
13	Next	Please refer to the next button in the front panel.
14	Slow play	Please refer to the slow play button in the front panel.
15	Play/Pause	Please refer to the play/pause button in the front panel.
16	Fast play	Please refer to the fast play button in the front panel.

2.4 Mouse Control

<table>
<tr><td rowspan="7">Left click mouse</td><td>System pops up password input dialogue box if you have not logged in.
In real-time monitor mode, you can go to the main menu.</td></tr>
<tr><td>If you have selected one menu item, left click mouse to view menu content.</td></tr>
<tr><td>Implement the control operation.</td></tr>
<tr><td>Modify checkbox or motion detection status.</td></tr>
<tr><td>Click combo box to pop up drop down list</td></tr>
<tr><td>In input box, you can select input methods. Left click the corresponding button on the panel you can input numeral/English character (small/capitalized). Here ← stands for backspace button. __ stands for space button.

In English input mode: _stands for input a backspace icon and ← stands for deleting the previous character.
 

In numeral input mode: _ stands for clear and ← stands for deleting the previous numeral.

When input special sign, you can click corresponding numeral in the front panel to input. For example, click numeral 1 you can input“/” , or you can click the numeral in the on-screen keyboard directly.
 
</td></tr>
<tr><td rowspan="2">Double left click mouse</td><td>Implement special control operation such as double click one item in the file list to playback the video.</td></tr>
<tr><td>In multiple-window mode, double left click one channel to view in full-window. Double left click current video again to go back to previous multiple-window mode.</td></tr>
</table>

Right click mouse	In real-time monitor mode, pops up shortcut menu: one-window, four-window, Pan/Tilt/Zoom, color setting, search, record, main menu. Among which, Pan/Tilt/Zoom and color setting applies for current selected channel. If you are in multiple-window mode, system automatically switches to the corresponding channel. 
	Exit current menu without saving the modification.
Press middle button	In numeral input box: Increase or decrease numeral value.
	Switch the items in the check box.
	Page up or page down
Move mouse	Select current control or move control
Drag mouse	Select motion detection zone
	Select privacy mask zone.

2.5 Virtual Keyboard & Front Panel

2.5.1 Virtual Keyboard Input Method

The system supports two input methods: numeral input and English character (small and capitalized) input.

Move the cursor to the text column, the text is shown as blue, input button pops up on the right. Click that button to switch between numeral input and English input (capitalized and small), Use > or < to shift between small character and capitalized character.

2.5.2 Front Panel Input Method

Move the cursor to the text column. Click Fn key and use direction keys to select number you wanted. Please click enter button to input.

3 Installation and Connections

Note: All the installation and operations here should conform to your local electric safety rules.

3.1 Check Unpacked DVR

When you receive the DVR from the shipping agency, please check whether there is any visible damage to the DVR appearance. The protective materials used for the package of the DVR can protect most accidental clashes during transportation. Then you can open the box to check the accessories.
Please check the items in accordance with the list on the warranty card. Finally you can remove the protective film of the DVR.

3.2 HDD Installation

Important

Before the HDD installation, please unplug the power cable.

This series DVR has four SATA HDDs. Please use HDD of 7200rpm or higher. It has no requirement for HDD capacity. Please install from the front-end to the rear-end. After you secure the HDD in the bracket, please connect the cable first and then install to the device.
You can refer to the appendix for recommended HDD brand.
Please follow the instructions listed below to install SATA HDDs.

①Remove the screws from the device

②Remove the upper cover

③Remove the HDD bracket

④Secure the HDD in the bracket

⑤Connect the SATA cable

⑥Connect the power cable

⑦Install the HDD bracket

⑧Install more HDD if necessary

⑨Fix the screws

After HDD installation, please check connection of data ribbon and power cord.

3.3 Desktop and Rack Mount

3.3.1 Desktop Mounting

To prevent surface damage, please make sure that the rubber feet are securely installed on the four corners of the bottom of the unit.

Position the unit to allow for cable and power cord clearance at the rear of the unit. Be sure that the air flow around the unit is not obstructed.

3.3.2 Rack Mounting

ATM series DVR is suitable for ATM special rack. The dimension is: 200（W）×130（H）× 320mm（L）. The extension series support max 4 HDDs.

- Use twelve screws to fix the unit
- Please make sure the indoor temperature is below 35℃ (95°f).
- Please make sure there is 15cm (6 inches) space around the device to guarantee sound ventilation.
- Please install from the bottom to the top.
- If there are more accessories connected in the rack, please take precaution measures in case the rack power is overload.

3.4 Connecting Power Supply

Please check input voltage and device power button match or not.

We recommend you use UPS to guarantee steady operation, DVR life span, and other peripheral equipments operation such as cameras.

3.5 Connecting Video Input and Output Devices

3.5.1 Connecting Video Input

The DVR automatically detects the video standard (PAL or NTSC BNC（1.0V_{P-P}，75Ω.) whenever you connect a video input. It accepts color, black-and-white and analog video.

The video signal should comply with your national standards.

The input video signal shall have high SNR, low distortion; low interference, natural color and suitable lightness.

Guarantee the stability and reliability of the camera signal:

The camera shall be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.

The camera and the DVR should have the same grounding to ensure the normal operation of the camera.

Guarantee stability and reliability of the transmission line

Please use high quality, sound shielded BNC. Please select suitable BNC model according to the transmission distance.

If the distance is too long, you should use twisted pair cable, and you can add video compensation devices or use optical fiber to ensure video quality.

You should keep the video signal away from the strong electromagnetic interference, especially the high tension current.

Keep connection lugs in well contact

The signal line and shielded wire should be fixed firmly and in well connection. Avoid dry joint, lap welding and oxidation.

Figure 3-1

3.5.2 Connecting Video Output

Video output includes a BNC(PAL/NTSC BNC（1.0VP- P， 75Ω）output, HDMI and VGA output.

System supports BNC, VGA and HDMI output at the same time. See Figure 3-2.

When you are using pc-type monitor to replace the monitor, please pay attention to the following points:

- To defer aging, do not allow the pc monitor to run for a long time.
- Regular demagnetization will keep device maintain proper status.
- Keep it away from strong electromagnetic interference devices.

Using TV as video output device is not a reliable substitution method. You also need to reduce the working hour and control the interference from power supply and other devices. The low quality TV may result in device damage.

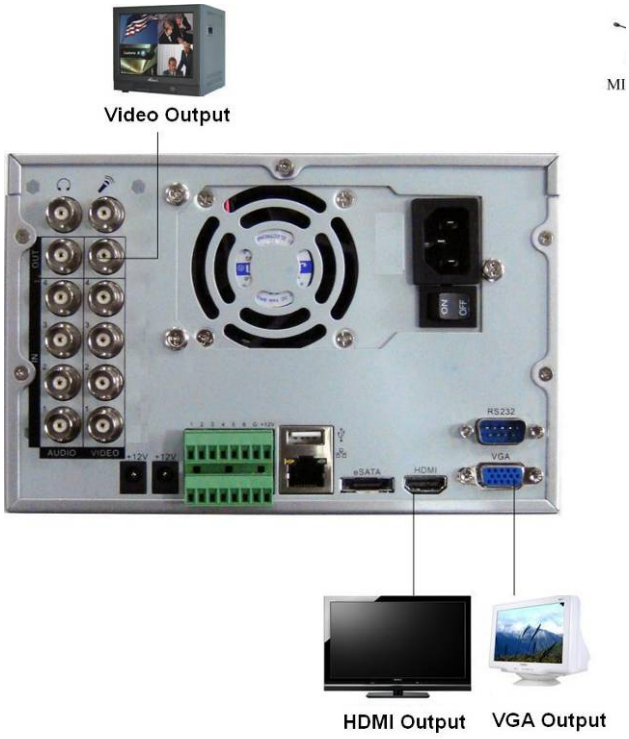


Figure 3-2

3.6 Connecting Audio Input & Audio Output, Alarm Input &Alarm Output, RS232/RS485 and Other Interfaces

3.6.1 Audio Input/Audio Output

These series products audio input port adopt 4-ch BNC port.
Due to high impedance of audio input, please use active sound pick-up.
Audio transmission is similar to video transmission. Try to avoid interference, dry joint, loose contact and it shall be away from high tension current.

The audio output signal parameter is usually over 200mv 1KΩ (BNC or RCA). It can directly connect to low impedance earphone, active sound box or amplifier-drive audio output device.
If the sound box and the pick-up cannot be separated spatially, it is easy to arouse squeaking. In this case you can adopt the following measures:

- Use better sound pick-up with better directing property.
- Reduce the volume of the sound box.
- Using more sound-absorbing materials in decoration can reduce voice echo and improve acoustics environment.
- Adjust the layout to reduce happening of the squeaking.

Please refer to Figure 3-3.

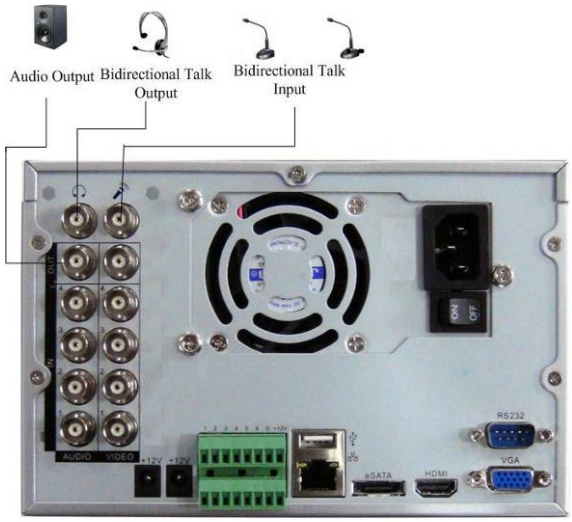


Figure 3-3

3.6.2 Alarm Input

Before connection, please make sure:

a. Alarm input mode is grounding alarm input.

b. Grounding signal is needed for alarm input.

c. When you are connecting two DVRs or you are connecting one DVR and one other device, please use a relay to separate them,

Please refer to Figure 3-4 for more information.

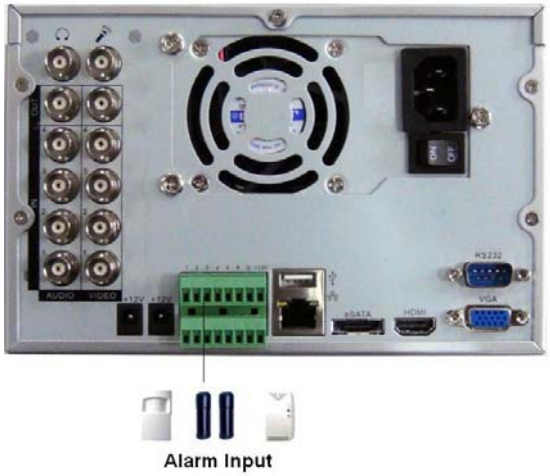


Figure 3-4

3.6.3 Alarm Output

The alarm output port should not be connected to high power load directly (It shall be less than 1A) to avoid high current which may result in relay damage. Please use the co contactor to realize the connection between the alarm output port and the load.
Please refer to Figure 3-5 for more information.

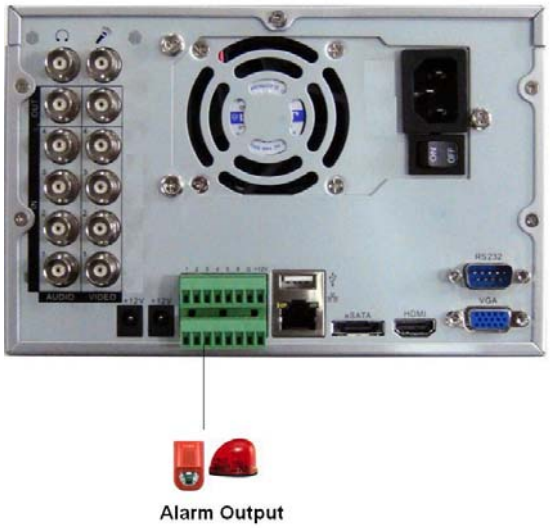


Figure 3-5

3.6.4 Alarm Input and Output Details

How to connect PTZ decoder

a. Ensure the decoder has the same grounding with DVR, otherwise you may not control the PTZ. Shielded twisted wire is recommended and the shielded layer is used to connect to the grounding.
b. Avoid high voltage. Ensure proper wiring and some thunder protection measures.
c. For too long signal wires, 120Ω should be parallel connected between A, B lines on the far end to reduce reflection and guarantee the signal quality.
d. “485 A, B” of DVR cannot parallel connect with “485 port” of other device.
e. The voltage between of A,B lines of the decoder should be less than 5v.

Please make sure the front-end device has soundly earthed.

Improper grounding may result in chip damage.

12V output Use

Please make sure the 12V output current is below 1A.

Front-end shall be properly earthed

Improper connection may result in chip damage.

Alarm Input Type

It can be NO (Normal open) or NC (Normal Close)

Please refer to Figure 3-6 alarm input and output information. The alarm gets activated when the circuit is connected to the ground.

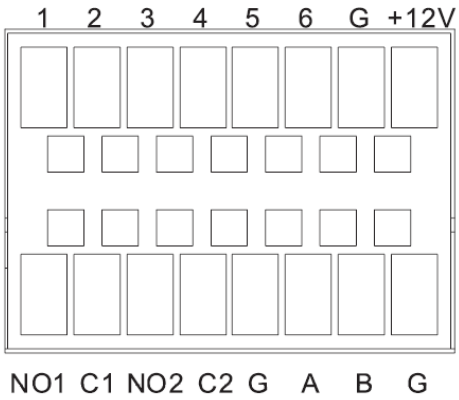


Figure 3-6

- The value 1 to 6 represents ALARM1 to ALARM4 respectively. The alarm gets activated in low voltage.
- NO1 C1，NO2 C2 are two groups of NO (normal open) on-off outputs.
- +12V is external alarm input. System needs external device to provide +12V power and you can connect it to the alarm device power below 1A.
- A/B is A cable and B cable to control 485 device. You can connect them to devices such as decoder. Please parallel connect a 120Ω resistance if there are too much PTZ decoders.
- "⏚"：Ground cable.

3.6.5 Alarm Input Port

- Normal open or Normal close type.
- Please parallel connect COM end and GND end of the alarm detector (Provide external power to the alarm detector).
- Please parallel connect the Ground of the DVR and the ground of the alarm detector.
- Please connect the NC port of the alarm sensor to the DVR alarm input(ALARM)
- Use the same ground with that of DVR if you use external power to the alarm device.
- Use the controllable +12V power to reset the smoke sensor remotely.

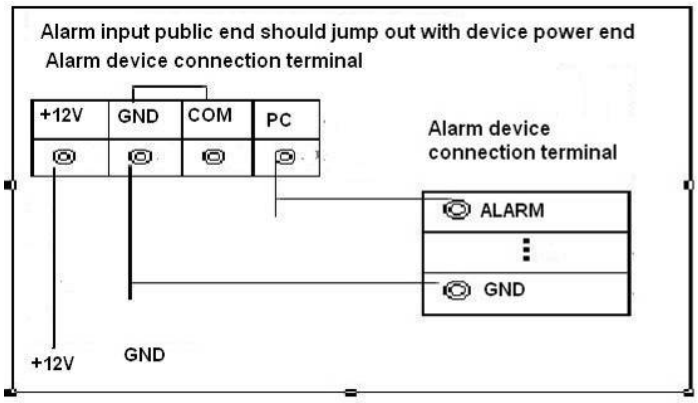


Figure 3-7

3.6.6 Alarm Output Port

- 2-way relay alarm output (NO contact). Provide external power to external alarm device.
- To avoid overloading, please read the following relay parameters sheet carefully.
- For controllable +12V, it can be used to provide power to devices such as reset smoke sensor.
- RS485 A/B cable is for the A/B cable of the PTZ decoder.

Relay Specification

Model:	**JRC-27F**	
Material of the contact	Silver	
Rating （resistance load）	Rated switch capacity	30VDC 2A, 125VAC 1A
	Maximum switch power	125VA 160W
	Maximum switch voltage	250VAC, 220VDC
	Maximum switch currency	1A
Insulation	between contacts with same polarity	1000VAC 1minute
	between contacts with different polarity	1000VAC 1minute
	between contact and winding	1000VAC 1minute
Surge voltage	between contacts with same polarity	1500VAC (10×160us)
Length of open time	3ms max	
Length of close time	3ms max	
Longevity	Mechanical	50×106 MIN (3Hz)
	Electrical	200×103 MIN (0.5Hz)
Temperature	-40℃ ~+70℃	

3.7 RS485

Please follow the steps listed below for PTZ cable connection. See Figure 3-8.

- Connect speed dome 485 cable to the ATM 485 port.

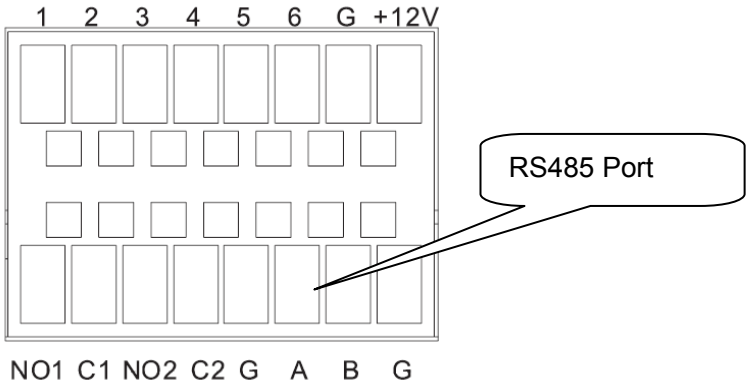


Figure 3-8

- Connect speed dome video cable to the ATM video input port.
- Connect the power to the speed dome.

Please refer to Chapter 5.3.8 Pan/Tilt/Zoom for PTZ setup information.

3.8 RS232

You can connect the DVR with POS or Keyboard through RS232.
With POS system, the DVR can communicate through RS232 and network. For the POS system, the DVR can integrate the text content and even search the record through the info.
The series DVR also support NKB operation. You can operate the DVR from the keyboard controls instead of using the control pad on the front panel of the unit.
To connect a NKB keyboard to the DVR:
1. Assemble the KBD keyboard according to the instructions in its accompanying installation manual.
2. Connect the KBD keyboard into one of the RS232 ports on the DVR or through network.

3.9 Other Interfaces

There are still other interfaces on the DVR, such as USB ports. You can refer to the Figure 3-9 for more information.

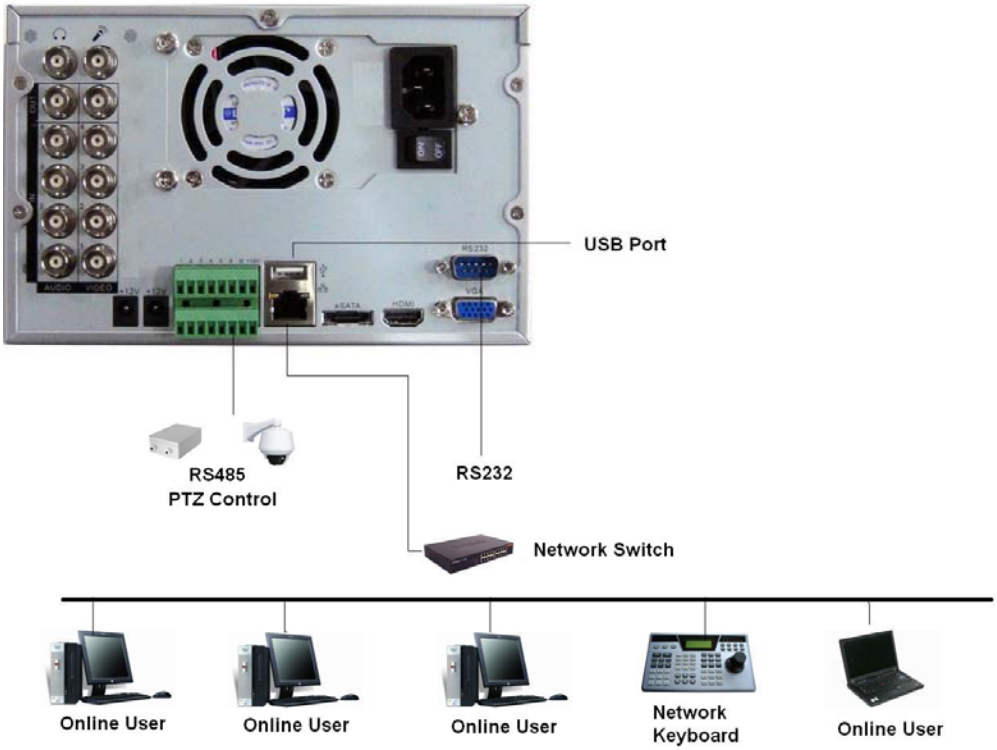

USB Port
RS485
PTZ Control
RS232
Network Switch
Online User
Online User
Online User
Network
Keyboard
Online User

Figure 3-9

4 Overview of Navigation and Controls

Before operation, please make sure:

- You have properly installed HDD and all the cable connections.
- The provided input power and the device power are matched.
- The external power shall be: AC90~264V 50+2% Hz
- Always use the stable current, if necessary UPS is a best alternative measure.

4.1 Login, Logout & Main Menu

4.1.1 Login

After system booted up, default video display is in multiple-window mode.

Click Enter or left click mouse, you can see the login interface. See Figure 4-1.

System consists of four accounts:

- **Username:** admin. **Password:** admin. (administrator, local and network)
- **Username:** 888888. **Password:** 888888. (administrator, local only)
- **Username:** 666666. **Passwords:** 666666(Lower authority user who can only monitor, playback, backup and etc.)
- **Username**: default. **Password**: default(hidden user)

You can use USB mouse, front panel, remote control or keyboard to input. About input method:

Click  to switch between numeral, English character (small/capitalized) and denotation.

Note:

For security reason, please modify password after you first login.

Within 30 minutes, three times login failure will result in system alarm and five times login failure will result in account lock!

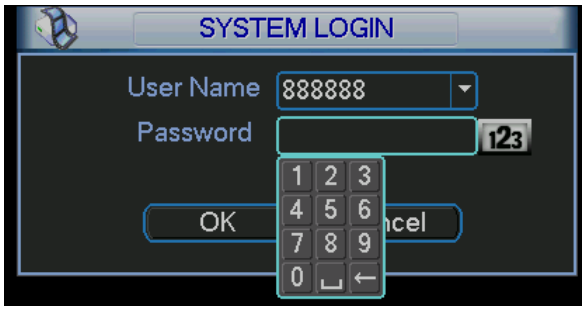


Figure 4-1

4.1.2 Main Menu

When you login, the system main menu is shown as below. See Figure 4-2.

There are total six icons: search, information, setting, backup, advanced and shutdown.

Move the cursor to highlight the icon, then double click mouse to enter the sub-menu.

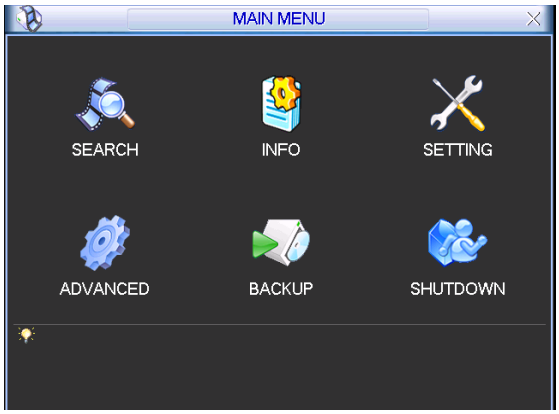


Figure 4-2

4.1.3 Logout

There are two ways for you to log out.

One is from menu option:

In the main menu, click shutdown button, you can see an interface is shown as below. See Figure 4-3.

Figure 4-3

There are several options for you. See Figure 4-4.

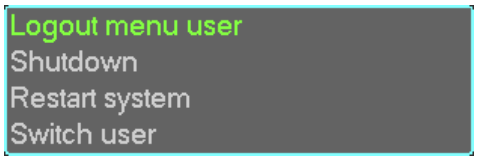


Figure 4-4

The other ways is to press power button on the front panel for at least 3 seconds, system will stop all operations. Then you can click the power button in the rear panel to turn off the DVR. Please note, before you replace the HDD, do remember shutting down the device and unplug the power cable.

4.1.4 Auto Resume after Power Failure

The system can automatically backup video and resume previous working status after power failure.

4.1.5 Replace Button Battery

Please make sure to use the same battery model if possible.

We recommend replace battery regularly (such as one-year) to guarantee system time accuracy.

Before replacement, please save the system setup, otherwise, you may lose the data completely!

4.2 Manual Record

4.2.1 Live Viewing

When you login, the system is in live viewing mode. You can see system date, time and channel name. If you want to change system date and time, you can refer to general settings (Main Menu->Setting->General). If you want to change the channel name, please refer to the display settings (Main Menu->Setting->Display)

1		Recording status	3		Video loss
2		Motion detection	4		Camera lock

Note:

Please refer to the following sheet for channel status. stands for opening switch function, stands for closing switch function.

4.2.2 Manual record

Note:

You need to have proper rights to implement the following operations. Please make sure the HDDs have been properly installed.

4.2.2.1 Manual record menu

There are two ways for you to go to manual record menu.

- Right click mouse or in the main menu, Advanced->Manual Record.
- In live viewing mode, click record button in the front panel or record button in the remote control.

Manual record menu is shown as in Figure 4-5.

4.2.2.2 Basic operation

There are three statuses: schedule/manual/stop. Highlight icon "○" to select corresponding channel. System is in schedule mode by default.

- Manual: the highest priority. After manual setup, all selected channels will begin ordinary recording.
- Schedule: channel records as you have set in recording setup (Main Menu->Setting->Schedule)
- Stop: all channels stop recording.

Figure 4-5

4.2.2.3 Enable/disable record

Please check current channel status: “○” means it is not in recording status, “●” means it is in recording status.

You can use mouse or direction key to highlight channel number. See Figure 4-6.

Figure 4-6

4.2.2.4 Enable all channel recording

Highlight ○ below All, you can enable all channel recording.

- All channel schedule record

Please highlight “ALL” after “Schedule”. See Figure 4-7.

When system is in schedule recording, all channels will records as you have previously set (Main menu->Setting->Schedule).

The corresponding indication light in front panel will turn on.

Figure 4-7

- All channel manual record

Please highlight “ALL” after “Manual.” See Figure 4-8.

When system is in manual recording, all scheduled set up you have set in will be null ((Main menu->Setting->Schedule)).

You can see indication light in front panel turns on, system begins manual record now.

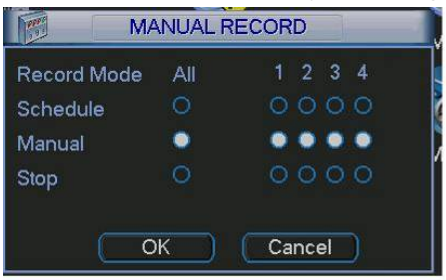


Figure 4-8

4.2.2.5 Stop all channel recording

Please highlight “ALL” after “Stop”. See Figure 4-9.

System stops all channel recording no matter what mode you have set in the menu (Main menu->Setting->Schedule)

Figure 4-9

4.3 Search & Playback

4.3.1 Search Menu

There are two ways for you to go to search menu.

- Click Pause/Play button in the remote control.
- Click search in the main menu.

Search interface is shown as below. See Figure 4-10.

Usually there are three file types:

- R: Regular recording file.
- A: External alarm recording file.
- M: Motion detection recording file
- C: Card number recording file.
- H: Manual record.

There are several playback windows. System supports 1/2-ch playback.

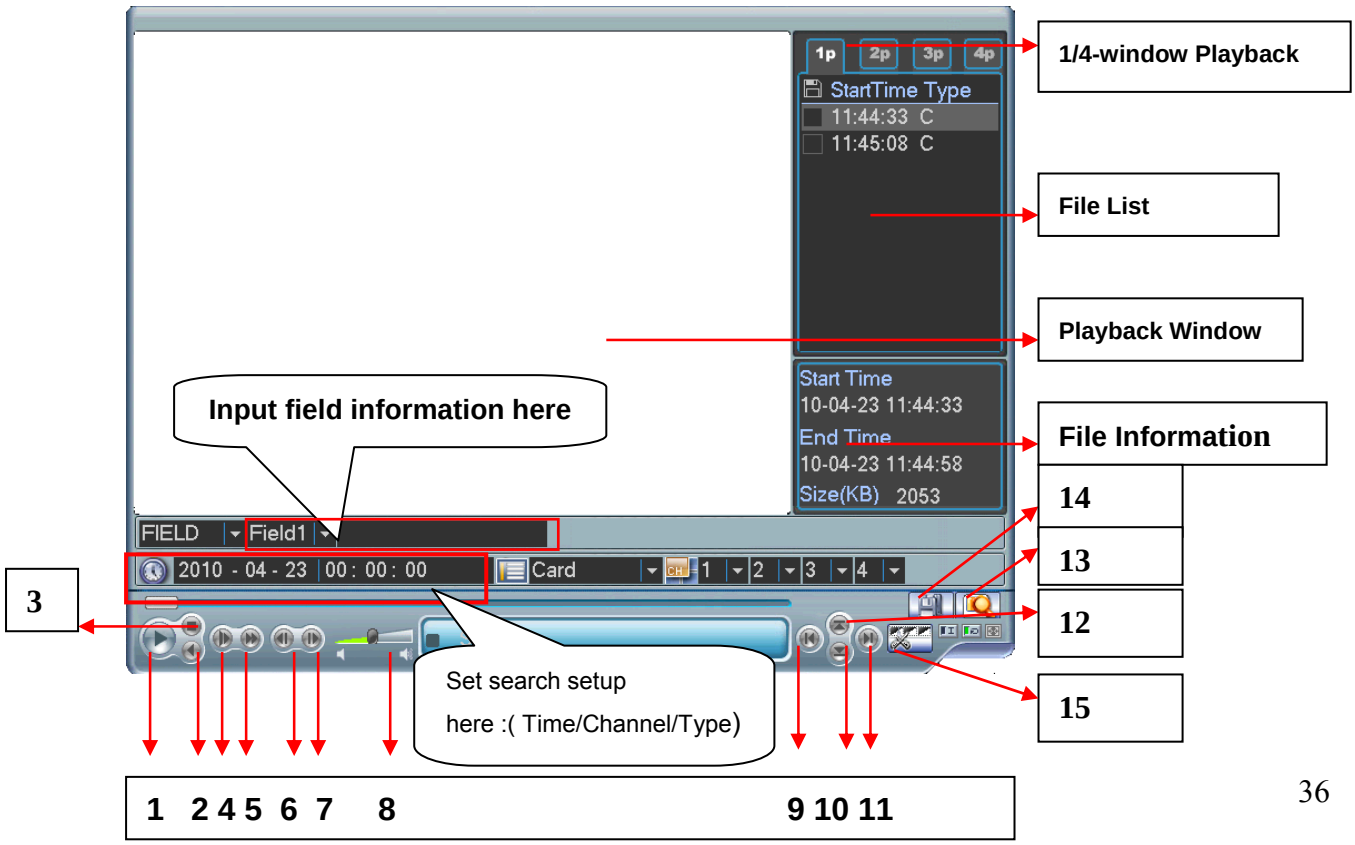


Figure 4-10

Please refer to the following sheet for more information.

Serial Number	Function
1	Play
2	Backward
3	Stop
4	Slow play
5	Fast play
6	Previous frame
7	Next frame
8	Volume
9	Previous file
10	Next channel
11	Next file
12	Previous channel
13	Search
14	Backup
15	Clip

4.3.2 Basic Operation

4.3.2.1 Playback

There are various search modes: video type, channel number or time. The system can max display 128 files in one screen. You can use up/down button to turn page.

Select the file name and double click mouse (or click enter button), you can view file content. System supports 1/2/3/4-channel playback mode.

4.3.2.2 Accurate playback

Input time (h/m/s) in the time column and then click playback button, system can operate accurate playback.

4.3.2.3 Synchronized playback function when playback

During playback process, click numeral key, system can switch to the corresponding channel video of the same time.

4.3.2.4 Digital zoom

When the system is in full-screen playback mode, drag your mouse in the screen to select a section and then left click mouse to realize digital zoom. You can right click mouse to exit.

4.3.2.5 File backup and clip

System supports backup operation during search. You can draw a √ before file name (multiple choices). Then click backup button (Button 14 in Figure 4-10).

If you want to clip a period of file, please playback the original file first. Click the  (Button 15 in Figure 4-10) at the start point (that is your new file beginning point). Drag the file to the end point (that is your new file end point) and then click the  again. Click the backup button (Button 14 in Figure 4-10) to save your current new file.

4.3.2.6 Slow playback and fast playback

Please refer to the following sheet for slow play and fast playback function.

Button	Illustration	Remarks
Fast play button ⏩	In playback mode, click this button to switch between various fast play modes such as fast play 1,fast play 2 and more.(Fast play 1 means fast play level 1 or not about speed)	Frame rate may vary due to different versions.
Slow play button ► (Or you can turn the outer ring counter clockwise.)	In playback mode, click this button to switch between various slow play modes such as slow play 1 or slow play 2.	
Play/Pause► ⏸	In slow playback mode, click this button to switch between play/pause modes.	
Previous/next	In playback mode, you can click ⏮ and⏭ to view previous or next video in current channel.	

Note:

All the operations here (such as playback speed, channel, time and progress) have relationship with hardware version.

Some series DVRs do not support some functions or playback speeds.

4.3.3 Sort by Card Number

In figure 4-10, please select card type and then input the field information. There are max four fields. For detailed information, please refer to Chapter 5.5.8 Card overlay.

You can input the last several card numbers (such as 5638) so you can view all the file records of the same last numbers.

4.3.4 Calendar

Click calendar icon  in

Figure 4-10, system pops up calendar for your reference.

Highlighted date means that there are record files in that day. You can click blue date to view file list.

In Figure 4-11, there are video files in June 13th and 14th . Double click date to view file list.

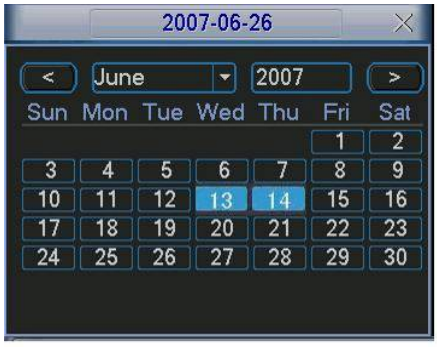


Figure 4-11

4.4 Schedule

When the system boots up, it is in default 24-hour regular mode. You can set record type and time in schedule interface.

4.4.1 Schedule Menu

In the main menu, from setting to schedule, you can go to schedule menu. See Figure 4-12. There are three record types: R-Regular, MD-Motion detection, A- Alarm. In some series, system also supports C-Card.

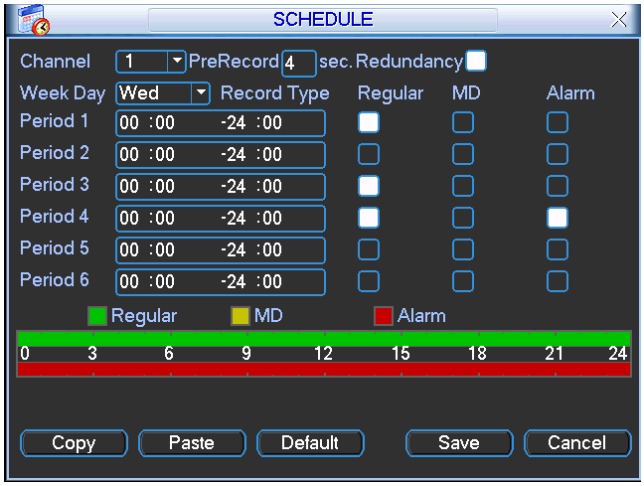


Figure 4-12

4.4.2 Basic Operation

There are total six periods. See Figure 4-12.

- Channel: Please select the channel number first. You can select "all" if you want to set for the whole channels.
- Week day: There are eight options: ranges from Saturday to Sunday and all.
- Pre-record: System can pre-record the video before the event occurs into the file. The value ranges from 1 to 30 seconds depending on the bit stream.
- Redundancy: System supports redundancy backup function. It allows you backup recorded file in two disks. You can highlight Redundancy button to activate this function. Please note, before enable this function, please set at least one HDD as redundant. (Main menu->Advanced->HDD Management) Please refer to Chapter 4.4.2.2 for detailed information.
- Record types: There are three types: regular, motion detection (MD) and Alarm.

Please highlight icon to select the corresponding function. After completed all the setups please click save button, system goes back to the previous menu.

At the bottom of the menu, there is a color bar for your reference. Green stands for regular recording, yellow stands for motion detection and red stands for alarm recording.

4.4.2.1 Quick Setup

This function allows you to copy one channel setup to another. After setting in channel 1, you can click paste button and turn to channel 2 and then click copy button. You can finish setting for one channel and then click save button or you can finish all setup and then click save button to memorize all the settings.

4.4.2.2 Redundancy

Redundancy function allows you to memorize record file in several disks. These files are created, packaged and closed simultaneously. When there is file damage occurred in one

disk, there is a spare one in the other disk. You can use this function to maintain data reliability and safety.

In the main menu, from Setting to Schedule, you can highlight redundancy button to enable this function. See Figure 4-12.

In the main menu, from Advanced to HDD management, you can set one or more disk(s) as redundant. You can select from the dropdown list. See Figure 4-13. System auto overwrites old files once hard disk is full.

Please note only read/write disk or read-only disk can backup file and support file search function, so you need to set at least one read-write disk otherwise you can not record video.

Note:

About redundancy setup please note:

- If current channel is not recording, current setup gets activated when the channel begin recording the next time.
- If current channel is recording now, current setup will get activated right away, the current file will be packet and form a file, then system begins recording as you have just set.

After completed all the setups please click save button, system goes back to the previous menu.

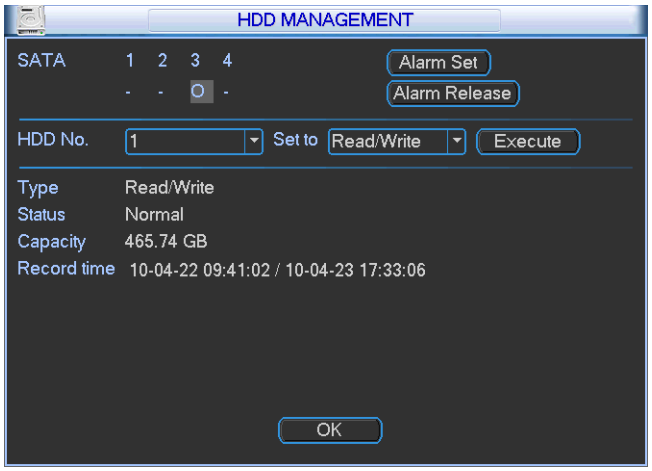


Figure 4-13

Playback or search in the redundant disk.

There are two ways for you to playback or search in the redundant disk.

- Set redundant disk(s) as read-only disk or read-write disk (Main menu->Advanced->HDD management). Set current read-wrote disk as redundant disk. See Figure 4-13.System needs to reboot to get setup activated. Now you can search or playback file in redundant disk.
- Dismantle the disk and play it in another PC.

4.5 Motion Detect

4.5.1 Go to Motion Detect Menu

In the main menu, from Setting to Detect, you can see motion detect interface. See Figure 4-14.

4.5.2 Motion Detect

Detection menu is shown as below. See Figure 4-14.

- Channel: select the channel you want to implement motion detection.
- Event type: from the dropdown list you can select motion detection type.

- Channel: select the channel to activate recording function once alarm occurred. Please make sure you have set MD record in encode interface(Main Menu->Setting->Schedule) and schedule record in manual record interface(Main Menu->Advanced->Manual Record)
- Latch: when motion detection complete, system auto delays detecting for a specified time. The value ranges from 1-300(Unit: second)
- Region: Click select button, the interface is shown as in Figure 4-15.Here you can set motion detection zone. There are 396(PAL)/330(NTSC) small zones.
- Sensitivity: System supports 6 levels. The sixth level has the highest sensitivity.
- Show message: System can pop up a message to alarm you in the local host screen if you enabled this function.
- Send email: System can send out email to alert you when alarm occurs.
- PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour &pattern when there is an alarm. Click "select" button, you can see an interface is shown as in Figure 4-16.
- Period: Click set button, you can see an interface is shown as in Figure 4-17. Here you can set for business day and non-business day. In Figure 4-17, click set button, you can see an interface is shown as in Figure 4-18. Here you can set your own setup for business day and non-business day.
- Anti-dither: Here you can set anti-dither time. For example, you can input 10 here. Once the motion detect occurs, the signal will maintain 10 seconds. Now the anti-dither function is for motion detection only. It is not valid in video loss/camera masking.
- Sensitivity: there are six levels. The sixth level has the highest sensitivity.
- Alarm output: when alarm occurred, system enables peripheral alarm devices.
- Tour: Here you can enable tour function when alarm occurs. It is a one-window tour. Please go to Chapter 5.3.9 Display for tour interval setup.

Please highlight icon  to select the corresponding function. After completed all the setups please click save button, system goes back to the previous menu.

Note:

In motion detection mode, you can not use copy/paste to set channel setup since the video in each channel may not be the same.

In Figure 4-15, you can left click mouse and then drag it to set a region for motion detection. Click Fn to switch between deployment and withdraw motion detection. After setting, click enter button to exit.

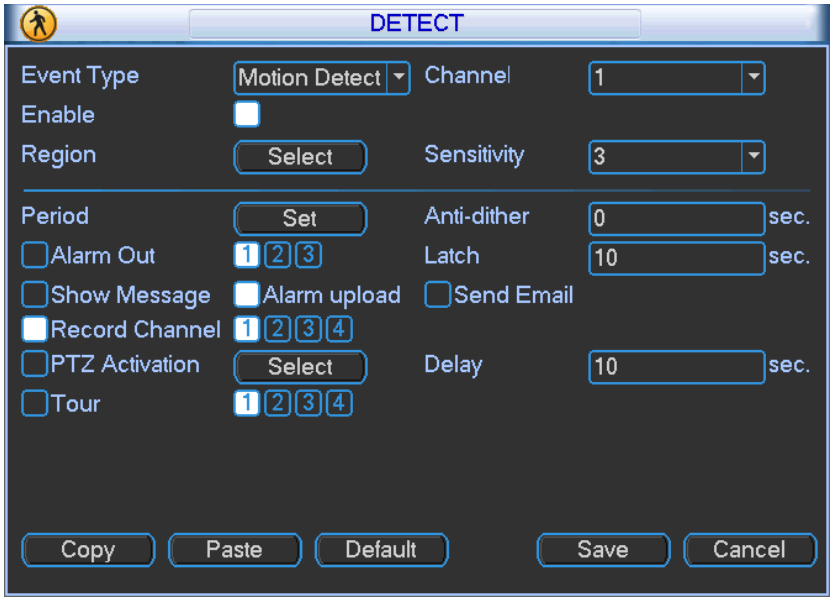


Figure 4-14

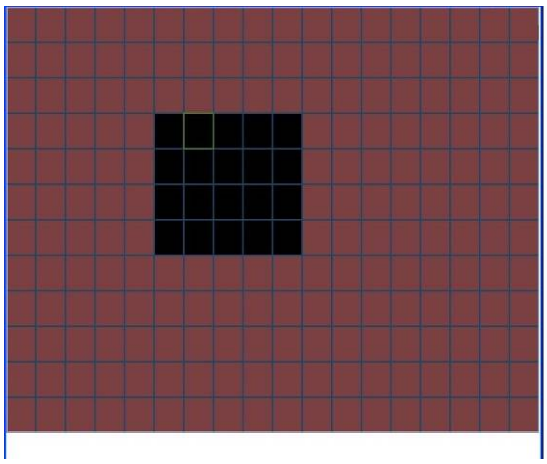


Figure 4-15

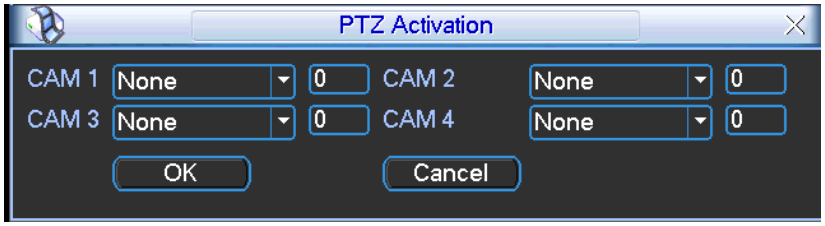


Figure 4-16

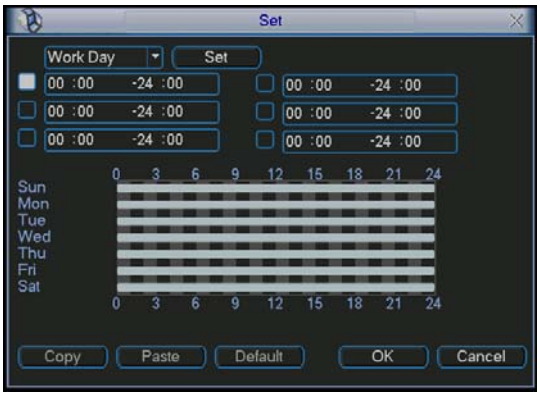


Figure 4-17

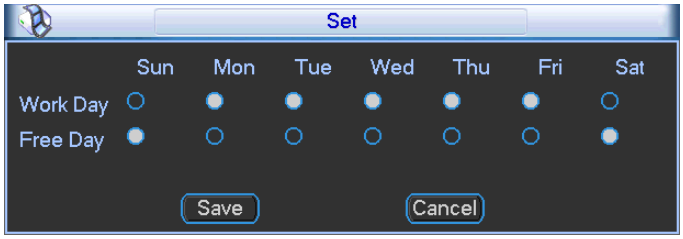


Figure 4-18

4.5.3 Video Loss

In Figure 4-14, select video loss in the Type item. You can see the interface is shown as in Figure 4-19.This function allows you to be informed when video loss phenomenon occurred. You can enable alarm output channel and then enable show message function.

- Channel: select the channel you want to enable lens shading alarm.
- Event type: please select video loss.
- Channel: select the channel to record when video loss occurred.
- Alarm output: activate peripheral alarm device when video loss occurred.
- Latch: when motion detection complete, system auto delays detecting for a specified time. The value ranges from 10-300(Unit: second)
- Show message: System can pop up a message to alarm you in the local host screen if you enabled this function.
- Send email: System can send out email to alert you when alarm occurs.
- PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour & pattern when there is an alarm. Click “select” button, you can see an interface is shown as in Figure 4-16.
- Period: Click set button, you can see an interface is shown as in Figure 4-17. Here you can set for business day and non-business day. In Figure 4-17, click set button, you can see an interface is shown as in Figure 4-18. Here you can set your own setup for business day and non-business day.
- Sensitivity: there are six levels. The sixth level has the highest sensitivity.
- Alarm output: when alarm occurred, system enables peripheral alarm devices.
- Tour: Here you can enable tour function when alarm occurs. It is a one-window tour. Please go to Chapter 5.3.9 Display for tour interval setup.

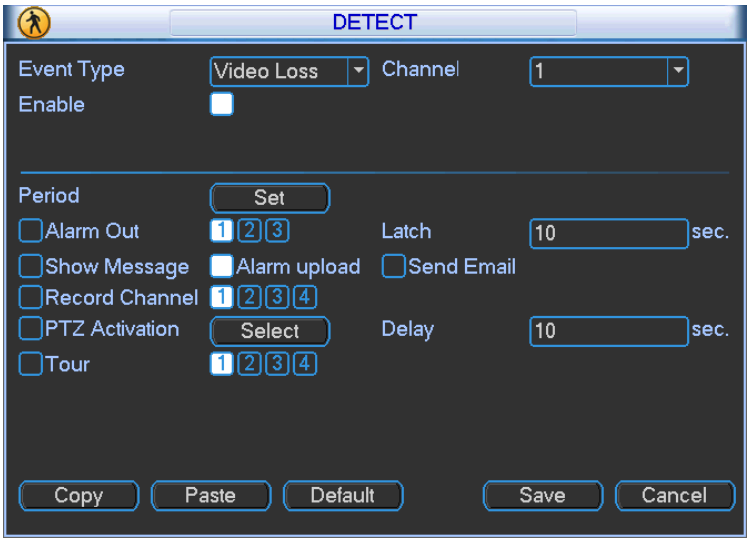


Figure 4-19

4.5.4 Camera Masking

When someone viciously masks the lens, or the output video is in one-color due to the environments light change, the system can alert you to guarantee video continuity. Camera mask detection interface is shown as in Figure 4-20.

- Channel: select the channel you want to enable camera mask detection function.
- Event type: please select camera mask detect from the dropdown list.
- Channel: select the channel to record when camera mask occurred.
- Alarm output: activate peripheral alarm device when camera mask occurred.
- Enable tour: Here is for you to activate tour between different cameras.
- Latch: when motion detection complete, system auto delays detecting for a specified time. The value ranges from 10-300(Unit: second)
- Show message: System can pop up a message to alarm you in the local host screen if you enabled this function.
- Send email: System can send out email to alert you when alarm occurs.
- PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour &pattern when there is an alarm. Click “select” button, you can see an interface is shown as in Figure 4-16.
- Period: Click set button, you can see an interface is shown as in Figure 4-17. Here you can set for business day and non-business day. In Figure 4-17, click set button, you can see an interface is shown as in Figure 4-18. Here you can set your own setup for business day and non-business day.
- Sensitivity: there are six levels. The six-level has the highest sensitivity.
- Alarm output: when alarm occurred, system enables peripheral alarm devices.
- Tour: Here you can enable tour function when alarm occurs. It is a one-window tour: Please go to Chapter 5.3.9 Display for tour interval setup.

Note:

In this interface, copy/paste function is only valid for the same type, which means you can not copy a channel setup in video loss mode to camera mask detect mode.

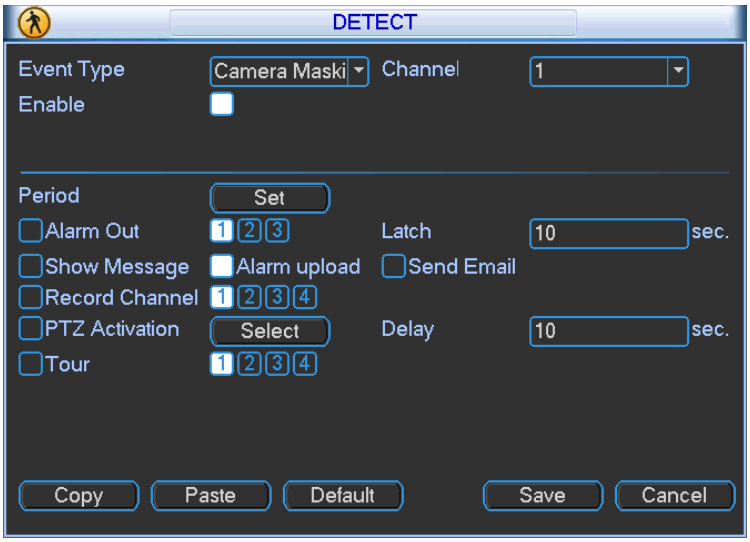


Figure 4-20

4.6 Alarm Setup and Alarm Activation

Before operation, please make sure you have properly connected alarm devices such as buzzer.

4.6.1 Go to alarm setup interface

In the main menu, from Setting to Alarm, you can see alarm setup interface. See Figure 4-21.

4.6.2 Alarm setup

Alarm interface is shown as below. See Figure 4-21.

- Alarm in: here is for you to select channel number.
- Event type: there are two types. One is local input and the other is network input.
- Type: normal open or normal close.
- PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour& pattern when there is an alarm. Click “select” button, you can see an interface is shown as in Figure 4-25.
- Period: Click set button, you can see an interface is shown as in Figure 4-23. Here you can set for business day and non-business day. In Figure 4-23, click set button, you can see an interface is shown as in Figure 4-24. Here you can set your own setup for business day and non-business day.
- Anti-dither: Here you can set anti-dither time.
- Show message: System can pop up a message to alarm you in the local host screen if you enabled this function.
- Send email: System can send out email to alert you when alarm occurs.
- Record channel: you can select proper channel to record alarm video (Multiple choices). At the same time you need to set alarm record in schedule interface (Main Menu->Setting->Schedule) and select schedule record in manual record interface (Main Menu->Advance->Manual Record).
- Latch: Here is for you to set proper delay duration. Value ranges from 10 to 300 seconds. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
- Tour: Here you can enable tour function when alarm occurs. It is a one-window tour: Please go to Chapter 5.3.9 Display for tour interval setup.

Please highlight icon to select the corresponding function. After completed all the setups please click save button, system goes back to the previous menu.

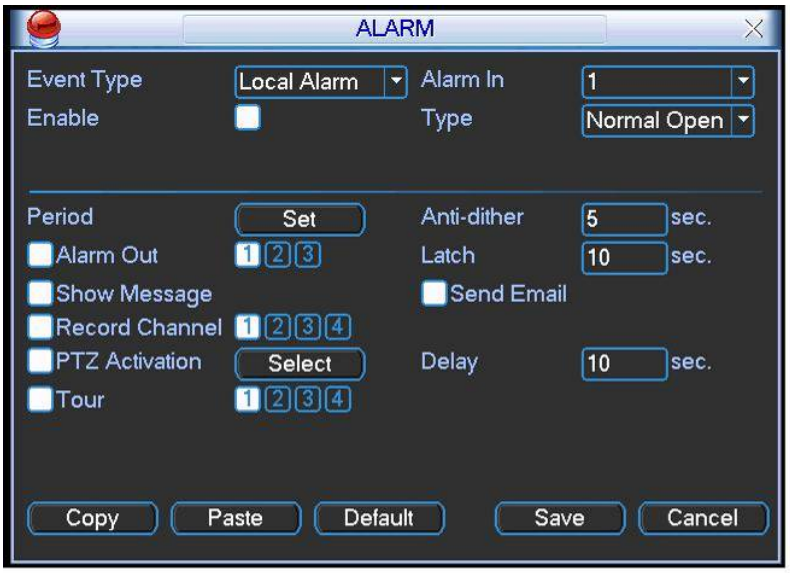


Figure 4-21

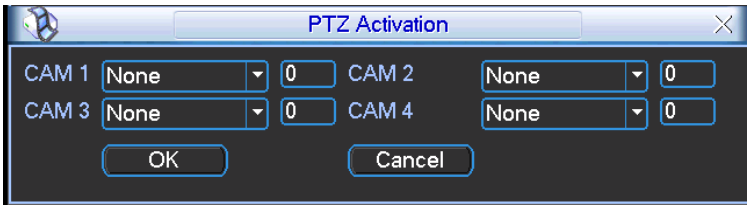


Figure 4-22

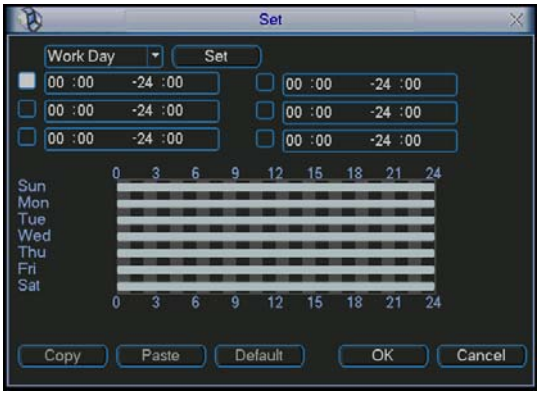


Figure 4-23

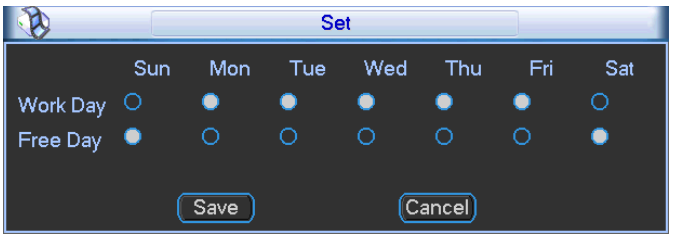


Figure 4-24

4.7 Backup

DVR support various backup devices such as CD-RW, DVD driver, USB backup device, eSATA and network download. Here we introduce USB backup first. You can refer to Chapter 7 Web Operation for network download backup operation.

4.7.1 Detect Device

Here is for you to view devices information. Here you can view the devices available and its corresponding capacity and status. See Figure 4-25.

Here you can click erase button to move the files in the selected device.

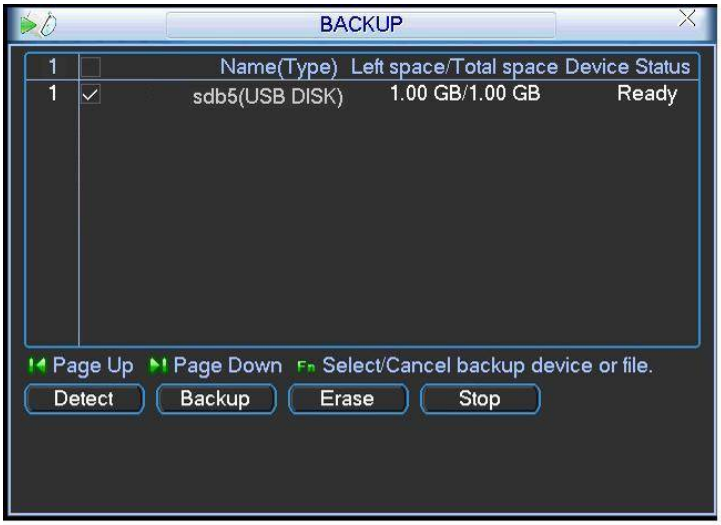


Figure 4-25

4.7.2 Backup

Select backup device and then channel, file start time and end time.

Click add button, system begins search. All matched files are listed below. System automatically calculates the capacity needed and remained. See Figure 4-26.

system only backup files with a √ before channel name. You can use Fn or cancel button to delete √ after file serial number.

Click backup button, you can backup selected files. There is a process bar for you reference. When the system completes backup, you can see a dialogue box prompting successful backup.

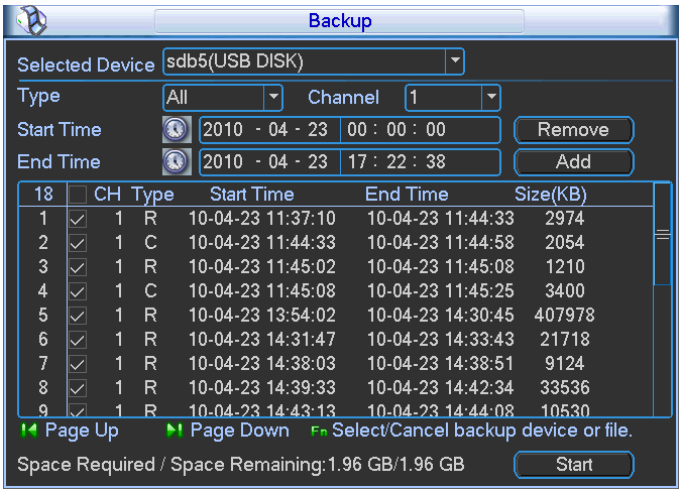


Figure 4-26

Click backup button, system begins burning. At the same time, the backup button becomes stop button. You can view the remaining time and process bar at the left bottom. See

Figure 4-27.

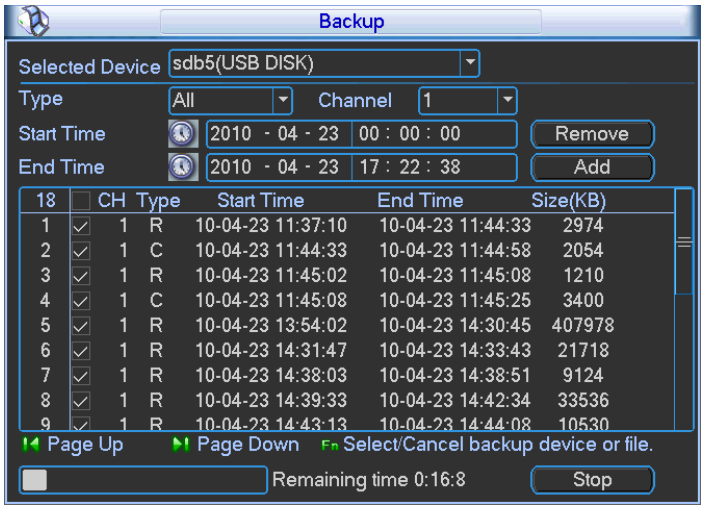


Figure 4-27

Tips:

During backup process, you can click ESC to exit current interface; but the system will not terminate backup process.

Note:

When you click stop button during the burning process, there are two conditions for different devices:

- For CD/DVD burner device, the stop function becomes activated immediately and there is no data in the burner.
- For USB device, system can backup the data before you click stop button. For example, if there is a file of 10 minutes, when you click stop after five minutes backup, system only save the previous 5-minute data in the device.

The file name format usually is: SN_CH+channel number+time Y+M+D+H+M+S. In the file name, the YDM format is the same as you set in general interface. (Main Menu ->Setting ->General).You can visit our website to view listed CD-ROM type.

4.8 PTZ Control and Color Setup

Note: All the operation here is based on PELCO protocol. , For other protocols, there might be a little difference.

4.8.1 Cable Connection

Please follow the procedures below to go on cable connection

- Connect the dome RS485 port to DVR 485 port.
- Connect dome video output cable to DVR video input port.

- Connect power adapter to the dome.

4.8.2 PTZ Setup

Note: The camera video should be in the current screen. Before setup, please check the following connections are right:

- PTZ and decoder connection is right. Decoder address setup is right.
- Decoder A (B) line connects with DVR A (B) line.

Boot up the DVR, input user name and password.

In the main menu, click setting, and then click Pan/Tilt Control button. The interface is shown as in Figure 4-28. Here you can set the following items:

- Channel: select the current camera channel.
- Protocol: select corresponding PTZ protocol(such as PELCOD)
- Address: default address is 1.
- Baud rate: select corresponding baud rate. Default value is 9600.
- Data bits: select corresponding data bits. Default value is 8.
- Stop bits: select corresponding stop bits. Default value is 1.
- Parity: there are three options: odd/even/none. Default setup is none.

Figure 4-28

After all the setting please click save button.

In one window display mode, right click mouse (click “Fn” Button in the front panel or click “Fn” key in the remote control). The interface is shown as in Figure 4-34.

Figure 4-29

Click Pan/Tilt/Zoom, the interface is shown as below. See Figure 4-30.

Here you can set the following items:

- Speed: value ranges fro 1 to 8.
- Zoom
- Focus
- Iris

Click icon and to adjust zoom, focus and iris.

Figure 4-30

In Figure 4-30, please click direction arrows (See Figure 4-31) to adjust PTZ position. There are total 8 direction arrows.

Figure 4-31

4.8.3 3D Intelligent Positioning Key

In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 4-32.

Click this key, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. It can realize PTZ automatically.

Figure 4-32

Here is a sheet for you reference.

Name	Function key	function	Shortcut key	Function key	function	Shortcut Key
Zoom		Near	▶		Far	▶▶
Focus		Near	◀		Far	▶
Iris		close	II ◀		Open	▶ II

4.9 Preset/ Patrol/Pattern/Scan

In Figure 4-30, click the “set” button. The interface is shown as below. See Figure 4-33.

Here you can set the following items:

- Preset
- Patrol(Tour)
- Pattern
- Border

Figure 4-33

In Figure 4-30, click page switch button, the interface is shown as in Figure 4-34.

Here you can activate the following functions:

- Preset
- Tour
- Pattern
- Auto scan
- Auto pan
- Flip
- Reset
- Page switch

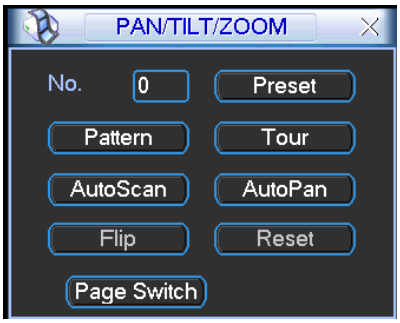


Figure 4-34

Note: The following setups are usually operated in the Figure 4-30,Figure 4-33 and Figure 4-34 .

4.9.1 Preset Setup

In Figure 4-30, use eight direction arrows to adjust camera to the proper position.

In Figure 4-33, click preset button and input preset number. The interface is shown as in Figure 4-35.

Now you can add this preset to one patrol (tour).

Figure 4-35

4.9.2 Activate Preset

In Figure 4-34, please input preset number in the No. blank, and click preset button.

4.9.3 Patrol Setup (Tour setup)

In Figure 4-33, click patrol button. The interface is shown as in Figure 4-36.Input preset number and add this preset to a patrol (tour). For each patrol (tour), you can input max 80 presets.

Figure 4-36

4.9.4 Activate Patrol (tour)

In Figure 4-33, input patrol (tour) number in the No. blank and click patrol button

4.9.5 Pattern Setup

In Figure 4-33, click pattern button and then click “begin” button. The interface is shown as in Figure 4-37. Then you can go to Figure 4-30 to modify zoom, focus, and iris.

Go back to Figure 4-37 and click “end” button. You can memorize all these operations as pattern 1.

Figure 4-37

4.9.6 Activate Pattern Function

In Figure 4-34, input mode value in the No. blank, and click pattern button.

4.9.7 Auto Scan Setup

In Figure 4-33, click border button. The interface is shown as in Figure 4-38.

Please go to Figure 4-30, use direction arrows to select camera left limit

Then please go to Figure 4-38 and click left limit button

Repeat the above procedures to set right limit.

Figure 4-38

4.9.8 Activate Auto Scan

In Figure 4-34, click “Auto Scan” button, the system begins auto scan. Correspondingly, the auto scan button changes to stop button. Click stop button to terminate scan operation.

4.10 Flip

In Figure 4-34, click page switch button, you can see an interface is shown as below. See Figure 4-39. Here you can set auxiliary function.

Click page switch button again, system goes back to Figure 4-30.

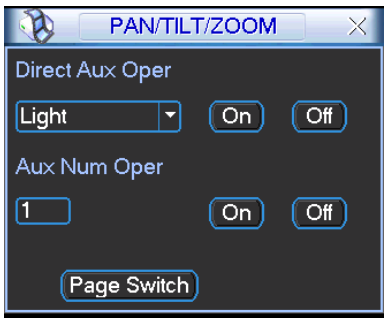
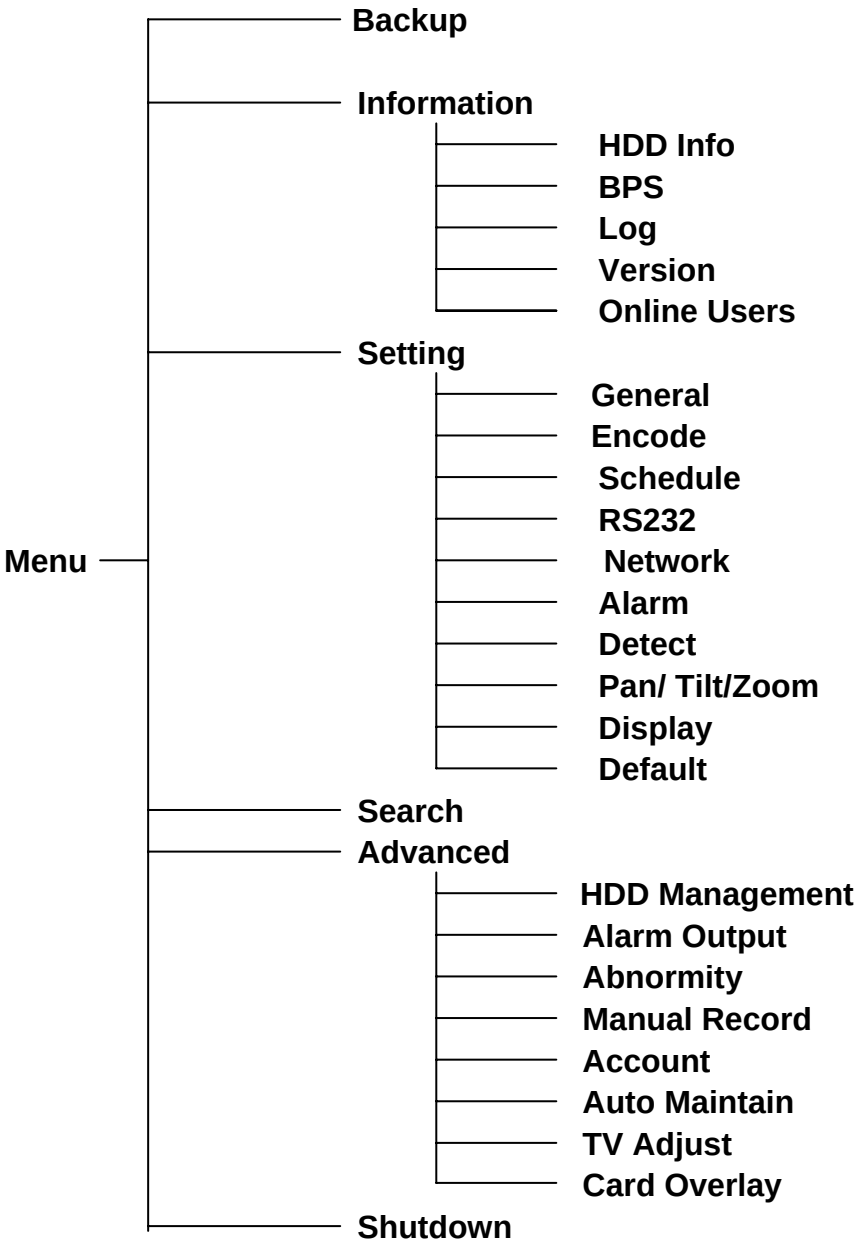


Figure 4-39

5 Understanding of Menu Operations and Controls

5.1 Menu Tree

This series DVR menu tree is shown as below.



Please note, you need to click Save button at the bottom of the interface to save the setup you have just made.
You need to highlight check box to enable corresponding function. Otherwise, this function is disabled.
All the operations below are based on our 4-ch series DVR.

5.2 Main Menu

When you login, the system main menu shows as below. See Figure 5-1. There are total six icons: search, Information, setting, backup, advanced and shutdown. Move the cursor to highlight the icon, then double click mouse to enter the sub-menu.

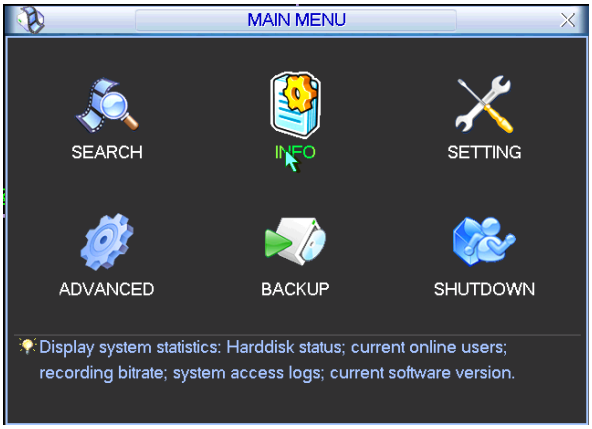


Figure 5-1

5.3 Setting

In the main menu, highlight setting icon and double click mouse. System setting interface is shown as below. See Figure 5-2.

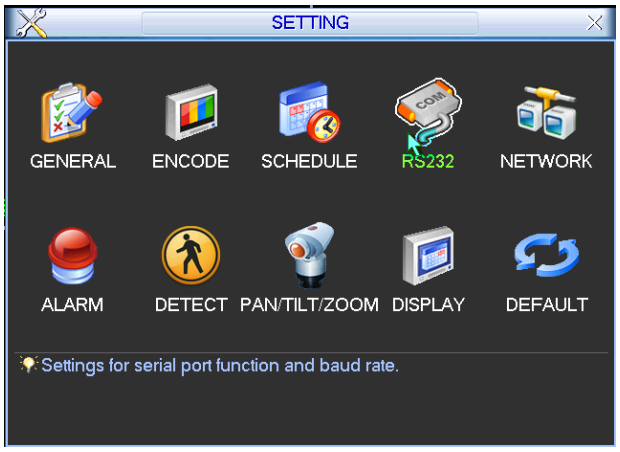


Figure 5-2

5.3.1 General

General setting includes the following items. See Figure 5-3.

- System time: here is for you to set system time
- Date format: there are three types: YYYYY-MM-DD: MM-DD-YYYYY or DD-MM-YYYY.
- Date separator: there are three denotations to separate date: dot, beeline and solidus.
- DST: Here you can set DST time and date. Please enable DST function and then click set button. You can see an interface is shown as in Figure 5-4. Here you can set start time and end time by setting corresponding week setup. In Figure 5-4, enable date button, you can see an interface is shown as in Figure 5-5. Here you can set start time and end time by setting corresponding date setup.
- Time format: there are two types: 24-hour mode or 12-hour mode.
- Language: system supports various languages: Chinese (simplified), Chinese (Traditional), English, Italian, Japanese, French, Spanish (All languages listed here are optional. Slight difference maybe found in various series.)

- HDD full: Here is for you to select working mode when hard disk is full. There are two options: stop recording or rewrite.
- Pack duration: Here is for you to specify record duration. Default value is 60 minutes.
- DVR No: when you are using one remote control to control several DVRs, you can give a name to each DVR for your management.
- Video standard: There are two formats: NTSC and PAL.
- Auto logout: Here is for you to set auto logout interval once login user remains inactive for a specified time. Value ranges from 0 to 60 minutes.
- LCD shutdown: Here you can set LCD shut down time. The value ranges from 0 to 120 minutes. If the device becomes idle in the specified period, system can auto close the LCD. You need to press the power button in the front panel if you want to view the video.

Note: since system time is very important, do not modify time casually unless there is a must. After completed all the setups please click save button, system goes back to the previous menu.

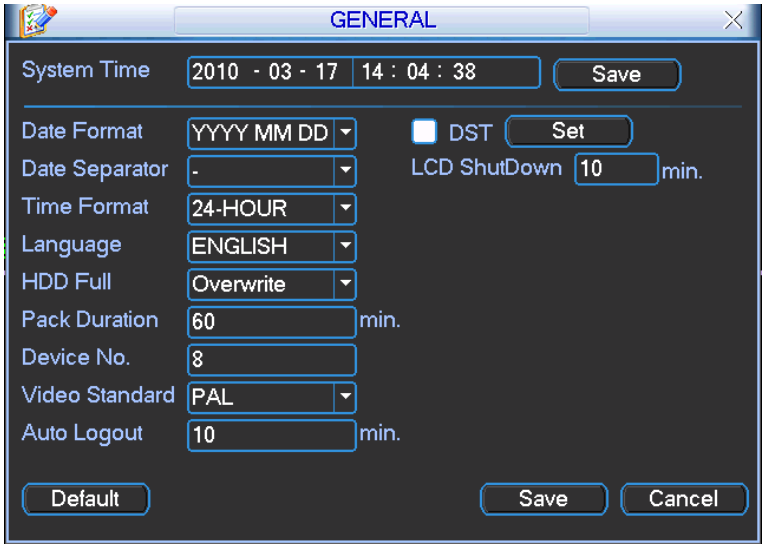


Figure 5-3

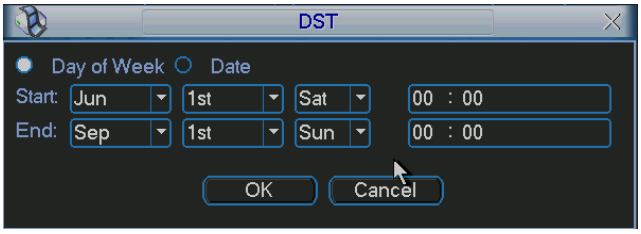


Figure 5-4

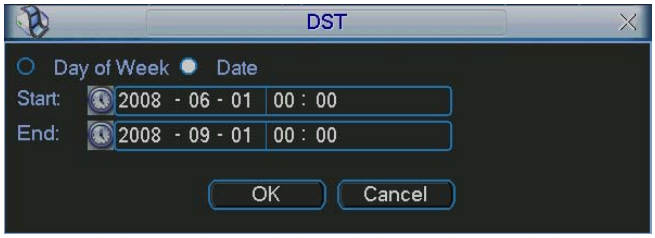


Figure 5-5

5.3.2 Encode

Encode setting includes the following items. See Figure 5-6.
Please note some series do not support extra stream.

- Channel: Select the channel you want.
- Compression: system supports H.264.
- Resolution: System supports various resolutions, you can select from the dropdown list. The option includes D1/HD1/BCIF/CIF/QCIF.
- Bit rate: system supports two types: CBR and VBR. In VBR mode, you can set video quality.
- Quality: There are six levels ranging from 1 to 6. The sixth level has the highest image quality.
- Frame rate: PAL: 1f/s-25f/s. NTSC: 1f/s-30f/s.
- Video/audio: you can enable or disable the video/audio respectively for the main stream and extra stream.
- Overlay: click overlay button, you can see an interface is shown in Figure 5-7.
- ✧ Cover area (Privacy mask): Here is for you to set window blanking section. You can drag you mouse to set proper section size.
- ✧ Preview/monitor: privacy mask has two types. Preview means the privacy mask zone can not be viewed by user when system is in preview status. Monitor means the privacy mask zone can not be view by the user when system is in monitor status.
- ✧ Time display: You can select system displays time or not when you playback.
- ✧ Channel display: You can select system displays channel number or not when you playback.

Please highlight icon to select the corresponding function.
This series DVR is suitable for ATM use. System can overlay card number, transaction time and etc on the monitor or playback window (Need protocol support). System also supports search by transaction information and card number.

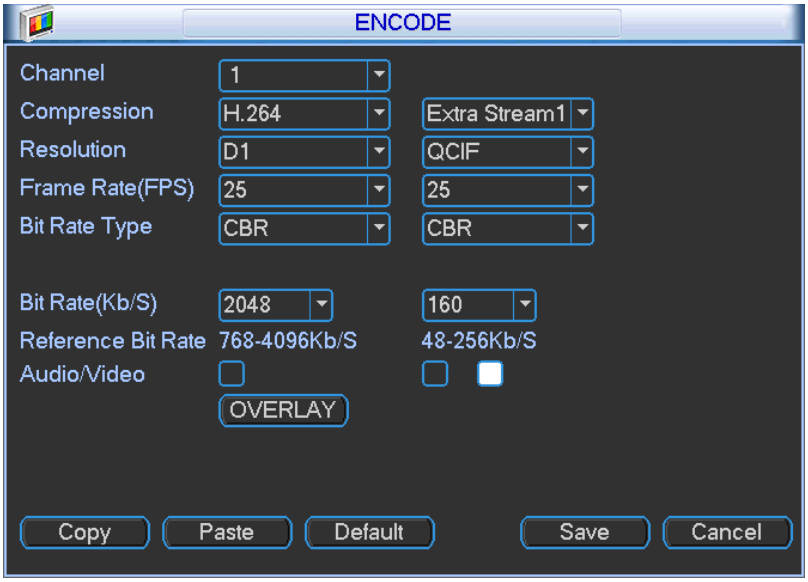


Figure 5-6

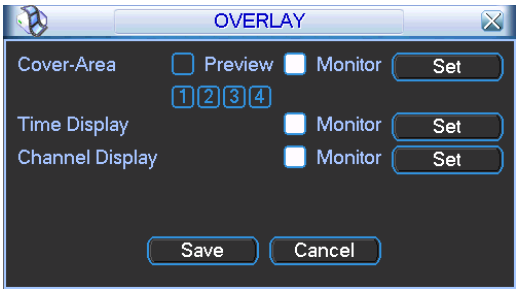


Figure 5-7

5.3.3 Schedule

Please refer to Chapter 4.4 schedule.

5.3.4 RS232

RS232 interface is shown as below. Here are five items. See Figure 5-8.

- Function: There are various devices for you to select. Console is for you to use the COM or mini-end software to upgrade or debug the program. The control keyboard is for you to control the device via the special keyboard. Transparent COM (adapter) is to connect to the PC to transfer data directly. Protocol COM is for card overlay function. Network keyboard is for you to use the special keyboard to control the device. PTZ matrix is to connect to the peripheral matrix control.
- Baud rate: You can select proper baud rate.
- Data bit: You can select proper data bit. The value ranges from 5 to 8.
- Stop bit: There are three values: 1/2.
- Parity: there are three choices: none/odd/even/space/mark.

System default setup is shown as below.

- Function: Protocol COM
- Baud rate: 9600
- Data bit: 8
- Stop bit: 1
- Parity: None.

After complete all the setups please click save button, system goes back to the previous menu.

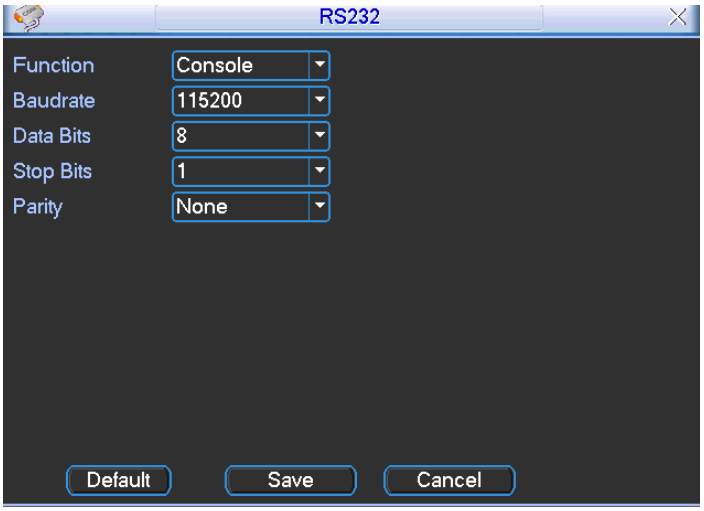


Figure 5-8

5.3.5 Network

Here is for you to input network information. See Figure 5-9.

- IP address: Here you can input IP address.
- DHCP: It is auto search IP function. When enable DHCP function, you can not modify IP/Subnet mask /Gateway. These values are from DHCP function. If you have not enabled DHCP function, IP/Subnet mask/Gateway display as o. You need to disable DHCP function to view current IP information. Besides, when PPPoE is operating, you can not modify IP/Subnet mask /Gateway.
- TCP port: Default value is 37777.
- UDP port: Default value is 37778.
- HTTP port: Default value is 80.
- Max connection: The value ranges from 0 to 10. System supports maximal 10 users. 0 means there is no connection limit.
- Transfer mode: Here you can select the priority between fluency/video qualities.
- Network download: System can process the downloaded data first if you enable this function.

After completing all the setups please click save button, system goes back to the previous menu.

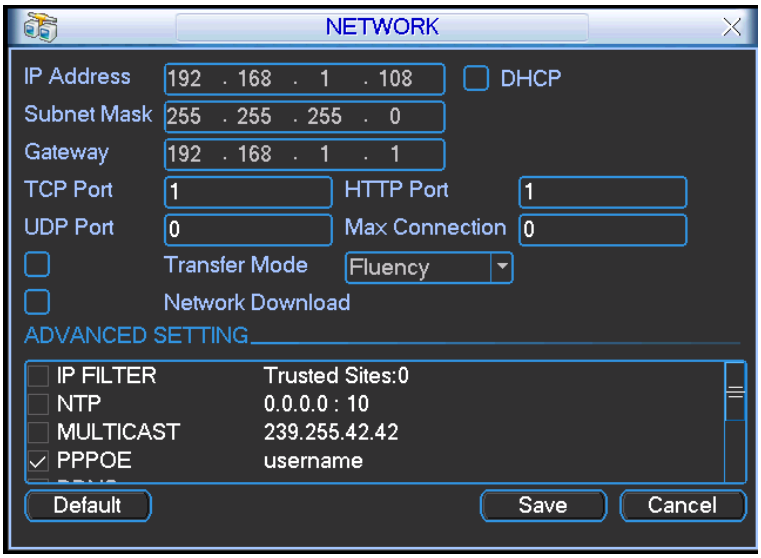


Figure 5-9

5.3.5.1 Advanced Setup

Advanced setup interface is shown as in Figure 5-10. Please draw a circle to enable corresponding function and then double click current item to go to setup interface.

Figure 5-10

5.3.5.2 IP Filter

IP filter interface is shown as in Figure 5-11. You can add IP in the following list. The list supports max 64 IP addresses.

Please note after you enabled this function, only the IP listed below can access current DVR. If you disable this function, all IP addresses can access current DVR.

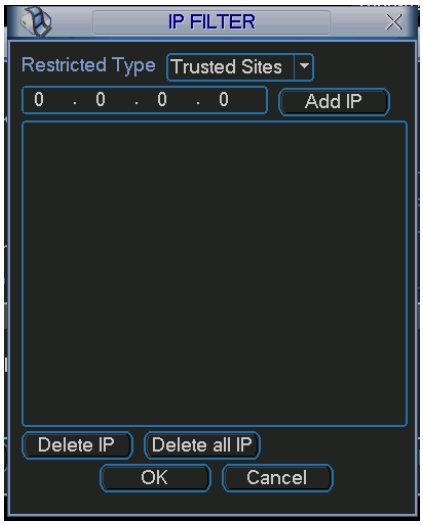


Figure 5-11

5.3.5.3 MULCAST

Multiple-cast setup interface is shown as in Figure 5-12.

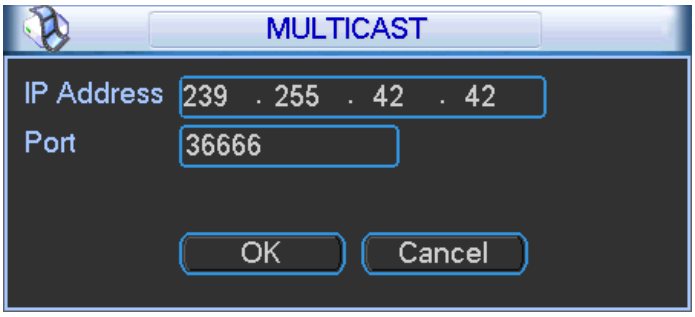


Figure 5-12

Here you can set a multiple cast group. Please refer to the following sheet for detailed information.

- IP multiple cast group address

-224.0.0.0-239.255.255.255

-“D” address space

  - The higher four-bit of the first byte=”1110”

- Reserved local multiple cast group address

-224.0.0.0-224.0.0.255

-TTL=1 When sending out telegraph

-For example

224.0.0.1 All systems in the sub-net

224.0.0.2 All routers in the sub-net

224.0.0.4 DVMRP router

224.0.0.5 OSPF router

224.0.0.13 PIMv2 router

- Administrative scoped addressees

-239.0.0.0-239.255.255.255

-Private address space

- Like the single broadcast address of RFC1918
- Can not be used in Internet transmission
- Used for multiple cast broadcast in limited space.

Except the above mentioned addresses of special meaning, you can use other addresses. For example:

Multiple cast IP: 235.8.8.36

Multiple cast PORT: 3666.

Now you login the Web, the Web can automatically get the Multicast address and the login the Multicast group. Now you can use the Multicast group to view the video.

5.3.5.4 PPPoE

PPPoE interface is shown as in Figure 5-13.

Input “PPPoE name” and “PPPoE password” you get from your ISP (Internet service provider). Click save button, you need to restart to activate your configuration.

After rebooting, DVR will connect to internet automatically. The IP address in the first column is the DVR dynamic value. The IP address in the second column is device DNS IP address. You can access this IP to visit the unit.

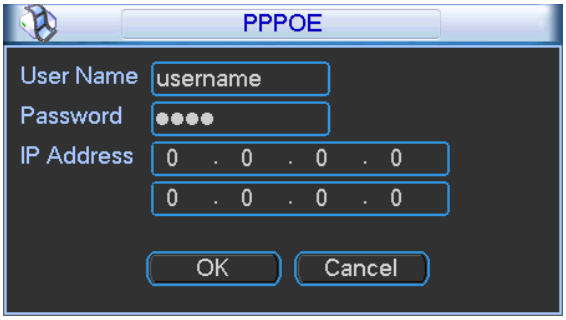


Figure 5-13

5.3.5.5 NTP Setup

You need to install SNTP server (Such as Absolute Time Server) in your PC first. In Windows XP OS, you can use command “net start w32time” to boot up NTP service.

NTP setup interface is shown as in Figure 5-14.

- Host IP: Input your PC address.
- Port: This series DVR supports TCP transmission only. Port default value is 123.
- Update interval: minimum value is 15(Unit: minute)
- Time zone: select your corresponding time zone here.

Here is a sheet for your time zone setup.

City /Region Name	Time Zone
London	GMT+0
Berlin	GMT+1
Cairo	GMT+2
Moscow	GMT+3
New Deli	GMT+5
Bangkok	GMT+7
Beijing (Hong Kong)	GMT+8
Tokyo	GMT+9
Sydney	GMT+10
Hawaii	GMT-10

Alaska	GMT-9
Pacific Time(P.T)	GMT-8
American Mountain Time(M.T)	GMT-7
American Central Time(C.T)	GMT-6
American Eastern Time(E.T)	GMT-5
Atlantic Time	GMT-4
Brazil	GMT-3
Middle Atlantic Time	GMT-2

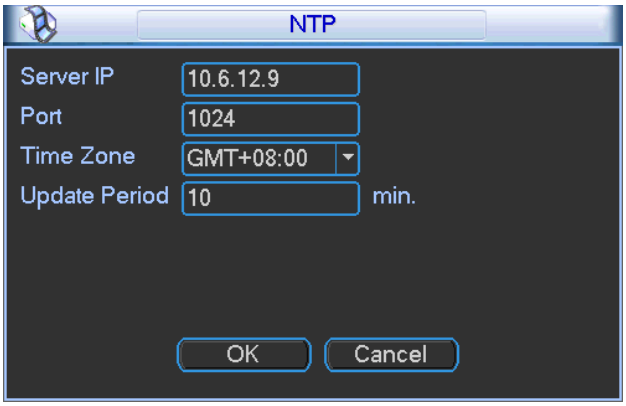


Figure 5-14

5.3.5.6 Email Setup

Email setup interface is shown as in Figure 5-15. Here you can set email server information.

Note:

You need to get the email address from your email service provider first. Or you can use the command PING the email SMTP address to get the email address.

Please use semicolon to separate the addresses.

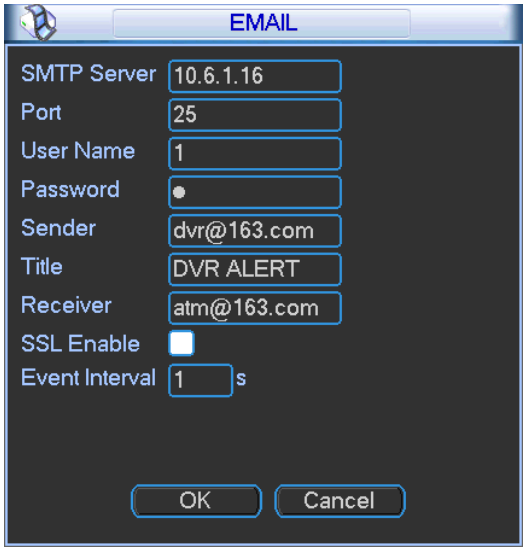


Figure 5-15

5.3.5.7 DDNS Setup

DDNS setup interface is shown as in Figure 5-16.

You need a PC of fixed IP in the internet and there is the DDNS software running in this PC. In other words, this PC is a DNS (domain name server).

In network DDNS, input your PPPoE name you get from you IPS and server IP (PC with DDNS) .
Click save button and then reboot system.
Click save button, system prompts for rebooting to get all setup activated.
After rebooting, open IE and input as below:
http：//(DDNS server IP)/(virtual directory name)/webtest.htm
e.g.: http：//10.6.2.85/DVR _DDNS/webtest.htm.)
Now you can open DDNSServer web search page.

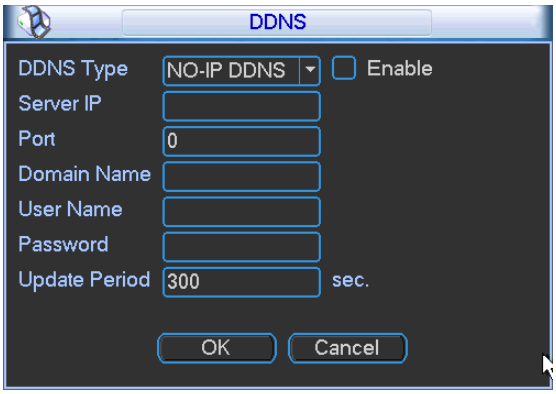


Figure 5-16

5.3.5.8 Alarm Server

You can set alarm in accordance with different alarm protocols. System can inform the alarm server when alarm occurs. See Figure 5-17.

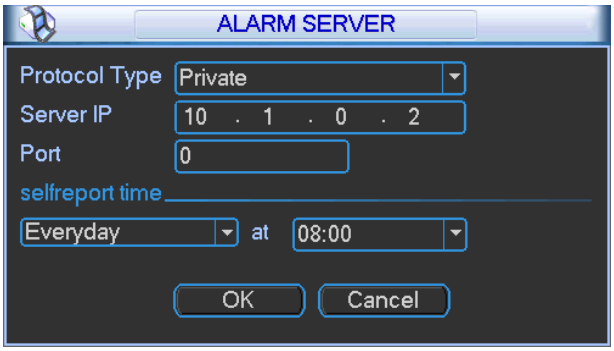


Figure 5-17

5.3.5.9 Network Storage (FTP)

Network storage allows you to use the FTP to storage the recorded file to the FTP server.
You need to download or buy FTP service tool (such as Ser-U FTP SERVER) to establish FTP service.
Please install Ser-U FTP SERVER first. From “start” -> “program” -> Serv-U FTP Server -> Serv-U Administator. Now you can set user password and FTP folder. Please note you need to grant write right to FTP upload user. See Figure 5-18.

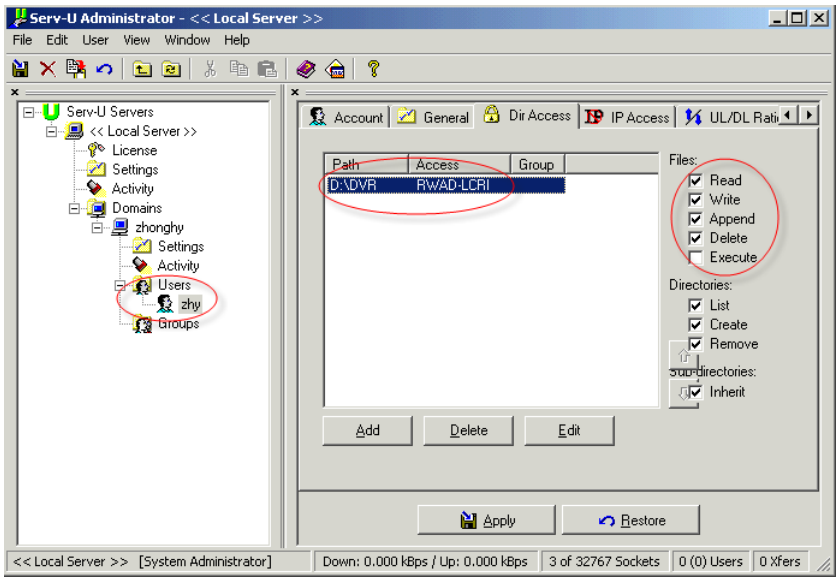


Figure 5-18

You can use a PC or FTP login tool to test setup is right or not.

For example, you can login user ZHY to FTP://10.10.7.7 and then test it can modify or delete folder or not. See Figure 5-19.

Figure 5-19

System also supports upload multiple DVRs to one FTP server. You can create multiple folders under this FTP.

In Figure 5-9, select network storage item and then double click mouse. You can see the following interface. See Figure 5-20.

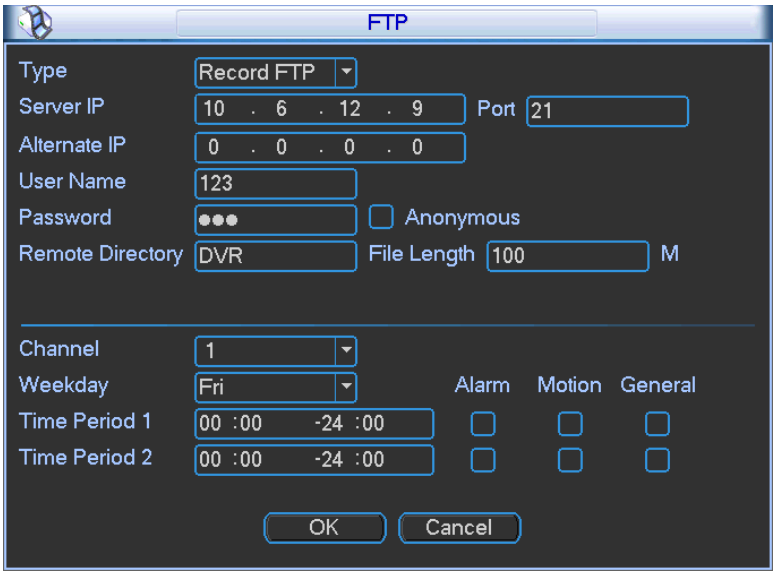


Figure 5-20

Please highlight the icon in front of Enable to activate FTP function.

Now FTP can upload alarm video and motion detection video. Please note, when you are using this function, please make sure current upload channel is in motion detection or alarm record status and there is video available.

Here you can input FTP server address, port and etc.

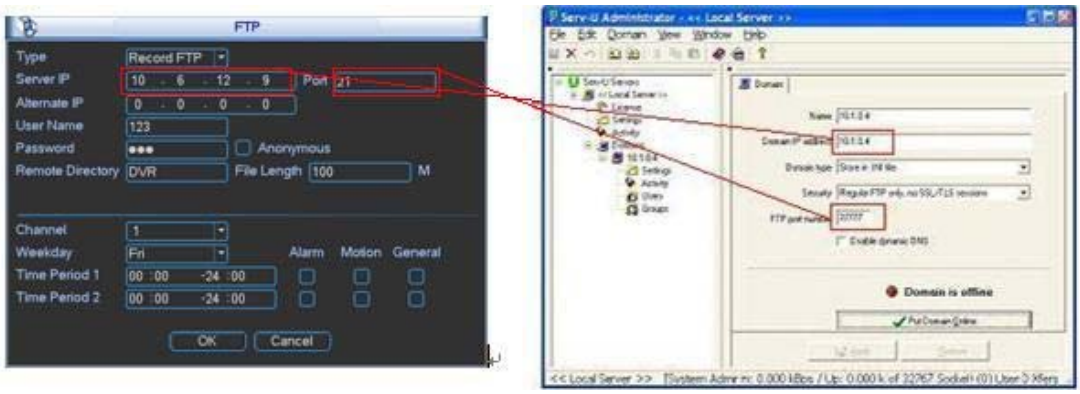


Figure 5-21

- File length: upload file length. When setup is larger than the actual file length, system will upload the whole file. When setup here is smaller than the actual file length, system only uploads the set length and auto ignore the left section.
- When interval value is 0, system uploads all corresponding files.
- Period 1 and period 2: you can set two periods for one each channel.

System file name is shown as in Figure 5-22.

Figure 5-22

5.3.6 Alarm

Please refer to Chapter 4.6 Alarm Setup and Activation.

5.3.7 Detect

Please refer to Chapter 4.5 Motion Detect.

5.3.8 Pan/Tilt/Zoom

The pan/tilt/zoom setup includes the following items. Please select channel first. See Figure 5-23.

- Protocol: select corresponding PTZ protocol such as PELCOD.
- Address: input corresponding PTZ address.
- Baud rate: select baud rate.
- Data bit: select data bit.
- Stop bit: select stop bit.
- Parity: there are three choices: none/odd/even.

After completed all the setups please click save button, system goes back to the previous menu. For detailed setup, please refer to Chapter 4.9 Preset/Patrol/Pattern/Scan.

Figure 5-23

5.3.9 Display

Display setup interface is shown as below. See Figure 5-24.

- Transparency: Here is for you to adjust transparency. The value ranges from 128 to 255.
- Channel name: Here is for you to modify channel name. Please note all your modification here only applies to DVR local end. You need to open web or client end to refresh channel name.
- Time display: You can select to display time or not when system is playback.
- Channel display: You can select to display channel name or not when system is playback.
- Enable tour: activate tour function.
- Interval: Input proper interval value here. The value ranges from 5-120 seconds. In tour process, you can use mouse or click Shift to turn on window switch function. Stands for opening switch function, stands for closing switch function.
- Resolution: The options include 800x600，1024x768，1280x720，1280x1024.
- Motion tour type: System support 1/4 window tour.
- Alarm tour type: System support 1/4 window tour.

Please highlight icon to select the corresponding function.

After completed all the setups please click save button, system goes back to the previous menu.

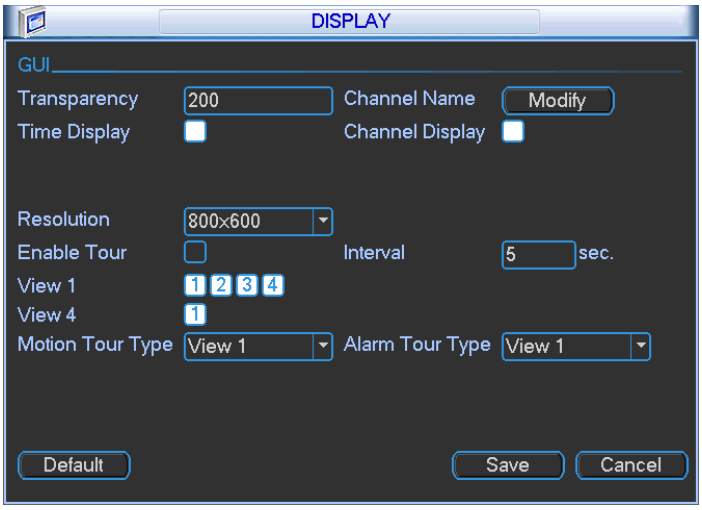


Figure 5-24

In Figure 5-24, click modify button after channel. You can see an interface is shown as in Figure 5-25. Please note all your modification here applies to local end only. You need to refresh web or client-end to get the latest channel name. System max support 25-digital character.

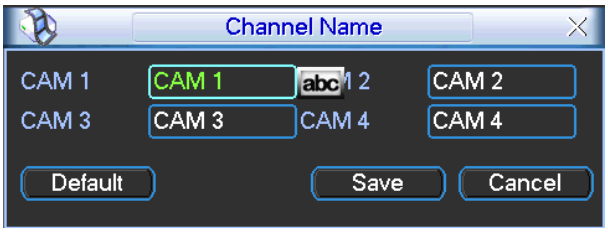


Figure 5-25

In tour mode, you can see the following interface. On the right corner, right click mouse or click shift button, you can control the tour. There are two icons:  stands for enabling window switch and  stands for enabling window function. See Figure 5-26.

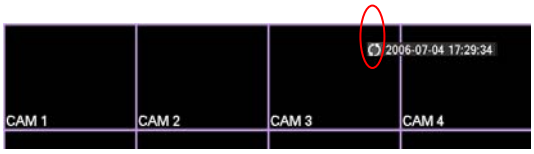


Figure 5-26

5.3.10 Default

Click default icon, system pops up a dialogue box. You can highlight  to restore default factory setup. See Figure 5-27.

- Select all
- General
- Encode
- Schedule
- RS232
- Network

- Alarm
- Detect
- Pan/tilt/zoom
- Display
- Channel name

Please highlight icon to select the corresponding function.

After completed all the setups please click save button, system goes back to the previous menu.

Warning!

System menu color, language, time display mode, video format, IP address, user account will not maintain previous setup after default operation!

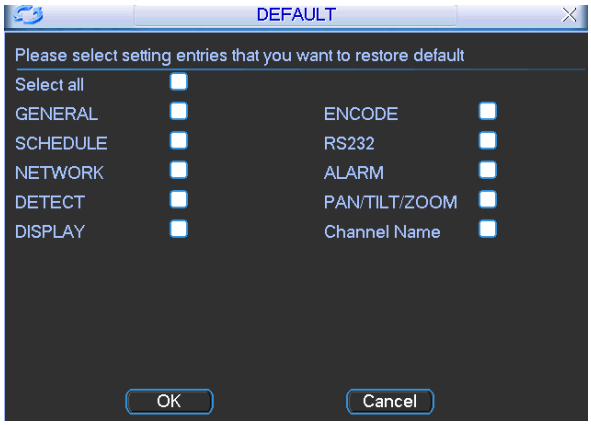


Figure 5-27

5.4 Search

Please refer to Chapter 4.3 Search.

5.5 Advanced

Double click advanced icon in the main window, the interface is shown as below. See Figure 5-28. There are total eight function keys: HDD management, alarm output, abnormity, manual record, account, auto maintain, TV adjust, and card overlay.

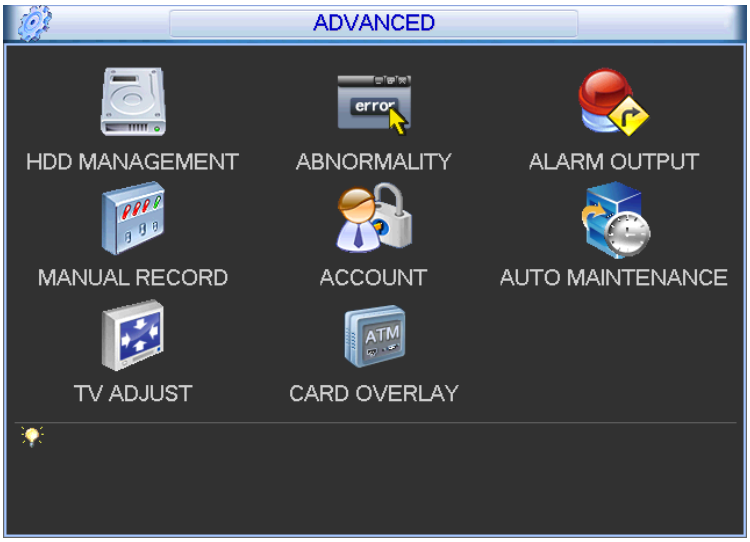


Figure 5-28

5.5.1 HDD Management

Here is for you to view and implement hard disk management. See Figure 5-29.
You can set proper mode for each hard disk from the dropdown list. Please note system automatically device each HDD to 11 partitions. You can view its detailed information.
When you use redundant backup function, you can set one or more redundant HDD(s).
Please note you need to set at least one read-write disk, otherwise system will not record video.
For detailed information you can refer to Chapter 4.4 Schedule.
After completed all the setups please click save button, system needs to reboot to get all the modification activated.

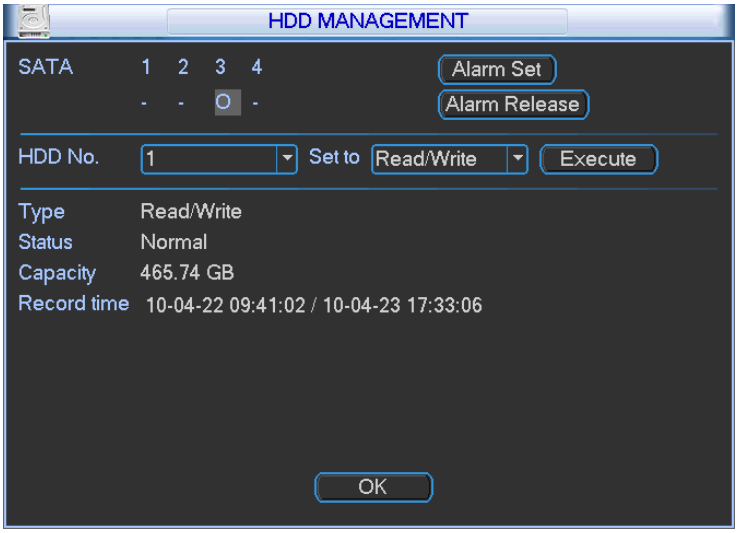


Figure 5-29

Click alarm set button, the interface is shown as below. See Figure 5-30. (This interface is the same as the abnormity setup).

Please highlight icon to select the corresponding function.
You can enable one or more alarm setups. The lower limit ranges from 1% to 99%. Alarm channel number ranges from 1 to 3. Delay value is from 10 to 300 seconds.
Please note when HDD capacity is not full system only alarms once!
After all the setups please click OK button, system goes back to the previous menu.

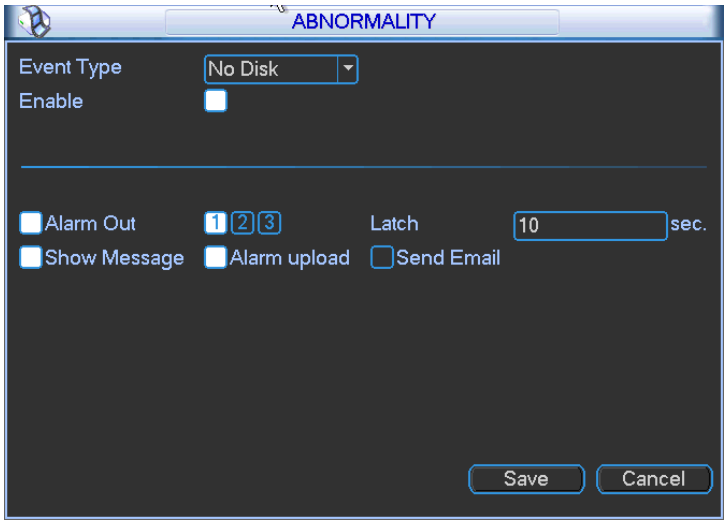


Figure 5-30

5.5.2 Abnormity

Abnormity interface is shown as in Figure 5-31.

- Event type: There are several options for you such as disk error, no disk and etc. (multiple choices)
- Alarm output: alarm activation output port (multiple choices). The third channel is the controllable 12V output.
- Latch: here you can set corresponding delaying time. The value ranges from 1s-300s. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
- Show message: system can pop up the message in the local screen to alert you when alarm occurs.
- Send email: System can send out email to alert you when alarm occurs.

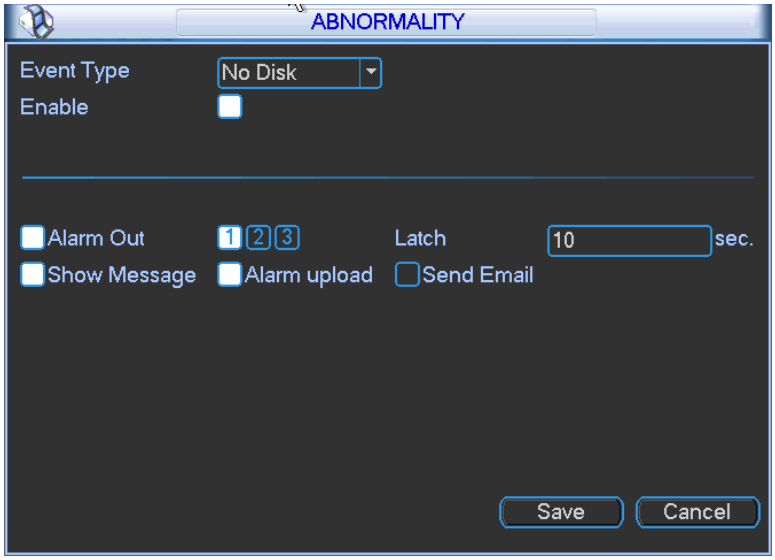


Figure 5-31

5.5.3 Alarm Output

Here is for you to set proper alarm output.

Please highlight icon to select the corresponding alarm output. See Figure 5-32.

After all the setups please click OK button, system goes back to the previous menu.

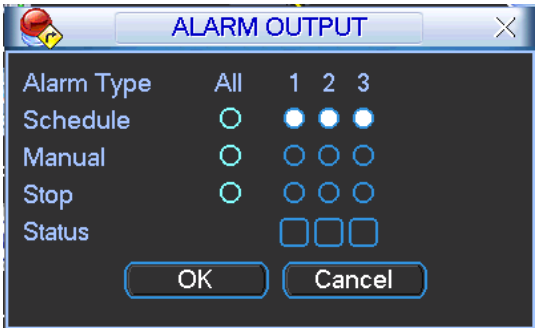


Figure 5-32

5.5.4 Manual Record

Please refer to Chapter 4.2.2 manual record.

5.5.5 Account

Here is for you to implement account management. See Figure 5-33. Here you can:

- Add new user
- Modify user
- Add group
- Modify group
- Modify password.

For account management please note:

- System account adopts two-level management: group and user. No limit to group or user amount.
- For group or user management, there are two levels: admin and user.
- The user name and group name can consist of eight bytes. One name can only be used once. There are four default users: admin/888888/666666 and hidden user “default”. Except user 6666, other users have administrator right.
- Hidden user “default” is for system interior use only and can not be deleted. When there is no login user, hidden user “default” automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.
- One user should belong to one group. User right can not exceed group right.
- About reusable function: this function allows multiple users use the same account to login.

After completed all the setups please click save button, system goes back to the previous menu.

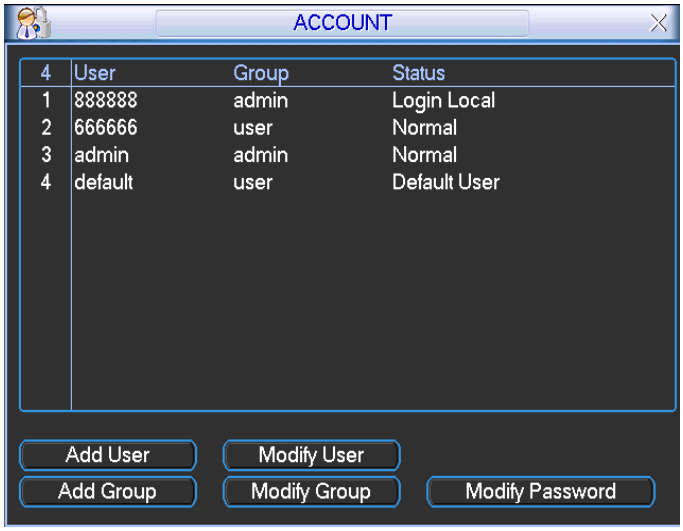


Figure 5-33

5.5.6 Auto Maintain

Here you can set auto-reboot time. See Figure 5-34.

You can select proper setup from dropdown list.

After completed all the setups please click save button, system goes back to the previous menu.

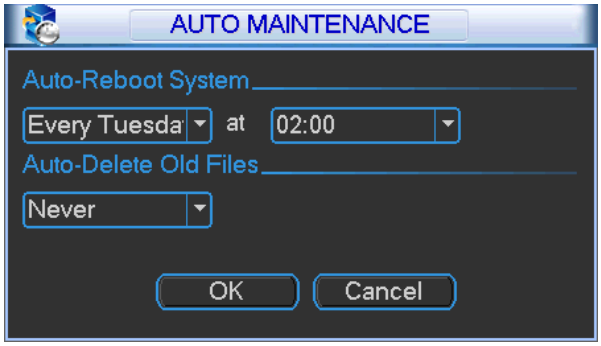


Figure 5-34

5.5.7 TV Adjust

Here is for you to adjust TV output setup. See Figure 5-35.

Please drag slide bar to adjust each item.

After all the setups please click OK button, system goes back to the previous menu.

Figure 5-35

5.5.8 Card Overlay

The card overlay function is for financial areas. It includes Sniffer, information analysis and title overlay function. The Sniffer mode includes COM and network.

5.5.8.1 COM Type

The COM interface is shown as below. See Figure 5-36.

- Protocol: Please select from the dropdown list.
- Setting: Click COM setting button, the interface is shown as in RS232 interface. Please refer to Chapter 5.3.4 RS232.
- Overlay channel: Please select the channel you want to overlay the card number.
- Overlay mode: There are two options: preview and encode. Preview means overlay the card number in the local monitor video. Encode means overlay the card number in the record file.
- Overlay Position: Here you can select the proper overlay position from the dropdown list.

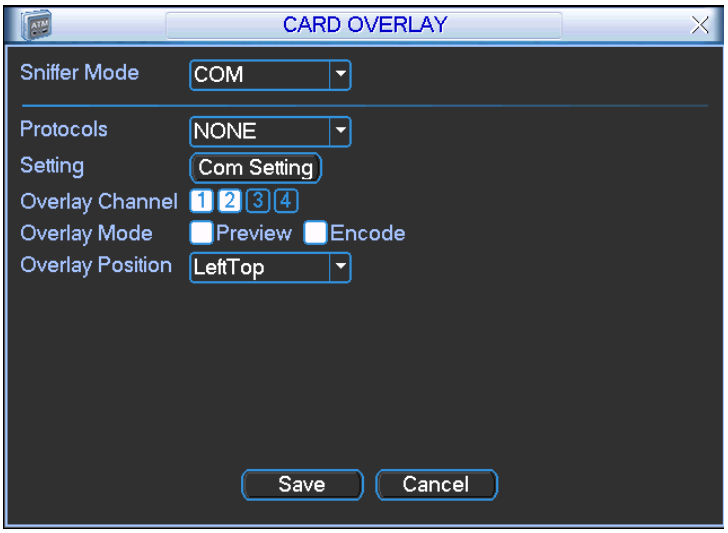


Figure 5-36

5.5.8.2 Network Type

The network type interface is shown as below. See Figure 5-37.

Here we take the ATM/POS protocol to continue.

There are two types: with or without the protocol according to client's requirements.

With the protocol

For ATM/POS with the protocol, you just need to set the source IP, destination IP (sometimes you need to input corresponding port number).

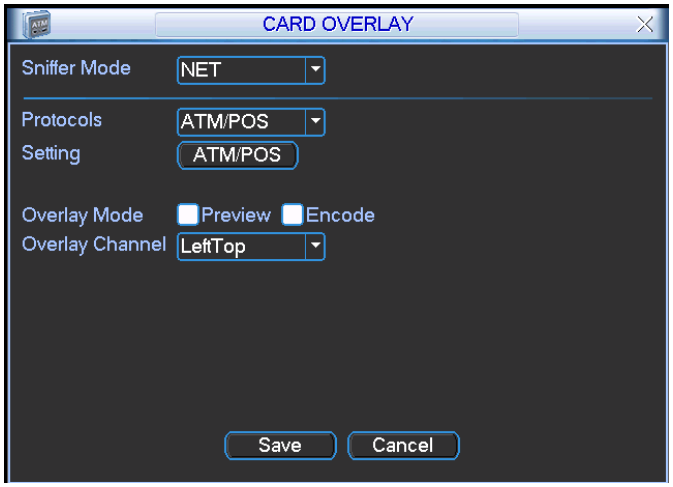


Figure 5-37

Without the protocol

For the ATM/POS without the protocol, the interface is shown as in Figure 5-38.

Source IP refers to host IP address that sends out information (usually it is the ATM host.)

Destination IP refers to other systems that receive information.

Usually you do not need to set source port and target port.

There are total four groups IP. The record channel applies to one group (optional) only.

Six frame ID groups verification can guarantee information validity and legal.

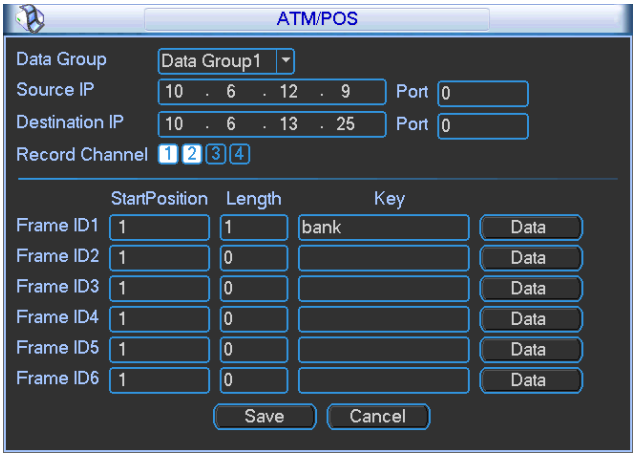


Figure 5-38

Click Data button you can see an interface is shown as in Figure 5-39.
Here you can set offset value, length, title according to your communication protocol and data package. .

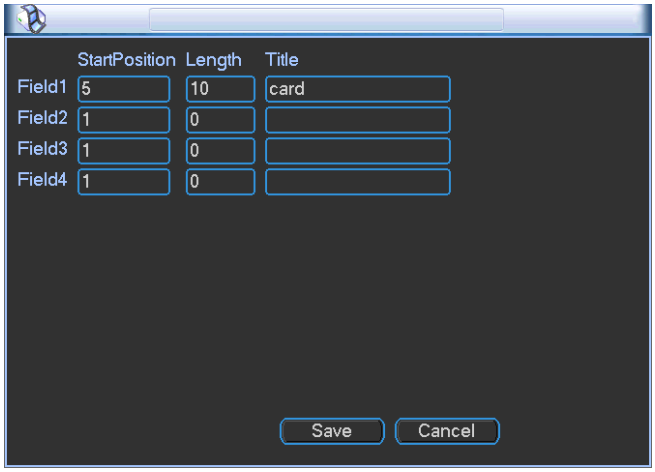


Figure 5-39

5.6 Information

Here is for you to view system information. There are total five items: HDD (hard disk information), BPS (data stream statistics), Log and version, and online user. See Figure 5-40.

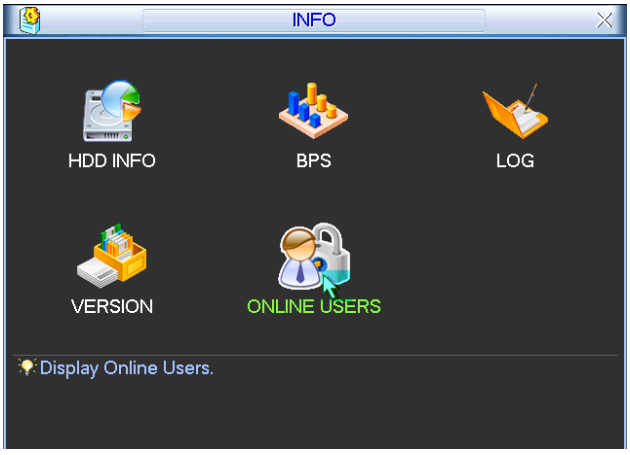


Figure 5-40

5.6.1 HDD Information

Here is to list hard disk type, total space, free space, video start time and status. See Figure 5-41. The HDD serial number with * means it is the working HDD (such as 1*).

Note:

Please remove the malfunction hard disk before you add a new one.

Once there is a hard disk confliction, please check hard disk time and system time is the same or not. Please go to setting then general to modify system time. At last, reboot the system to solve this problem.

If disk is damaged, system shows as “?”

The serial number ranges from the left to the right numbered as 1 to 4. There Is no slave or master.

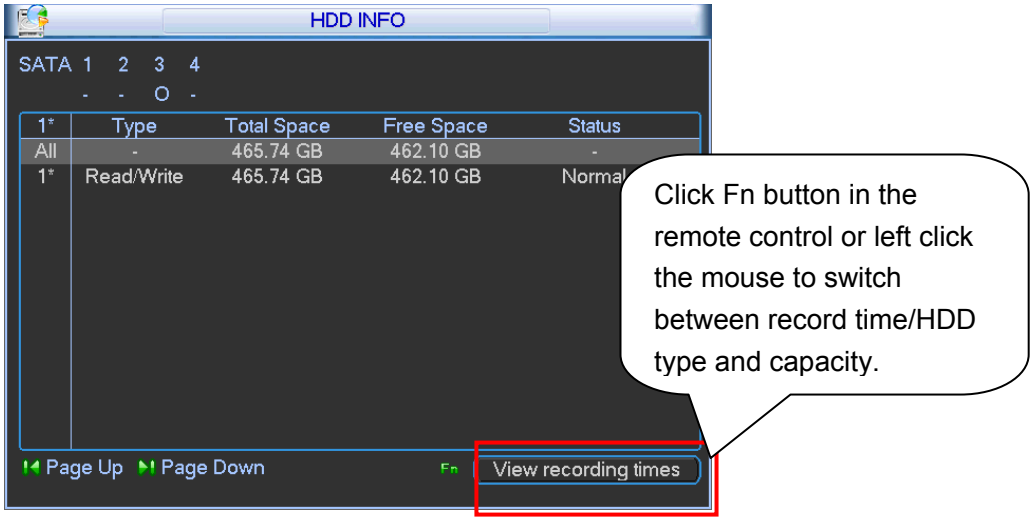


Figure 5-41

5.6.2 BPS

Here is for you to view current video data stream (Kb/s) and occupied hard disk storage (MB/h). See Figure 5-42.

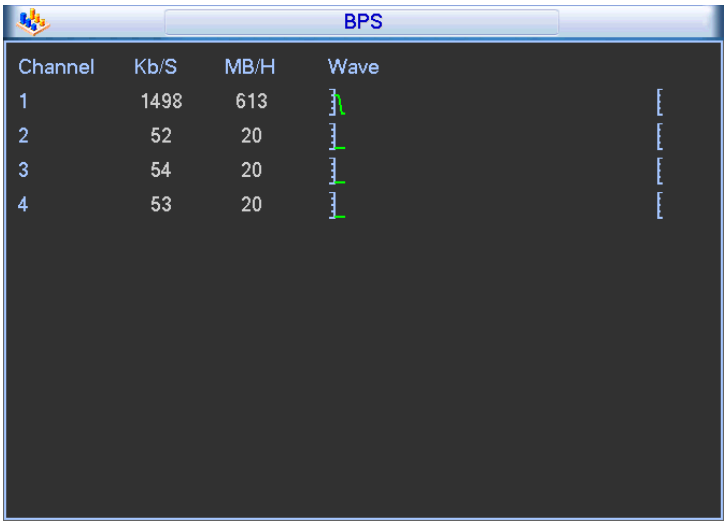


Figure 5-42

5.6.3 Log

Here is for you to view system log file. System lists the following information. See Figure 5-43.

The log types include system operation, configuration operation, data management, alarm event, record operation, user management, log clear and etc.

System max display 10 files in one page.

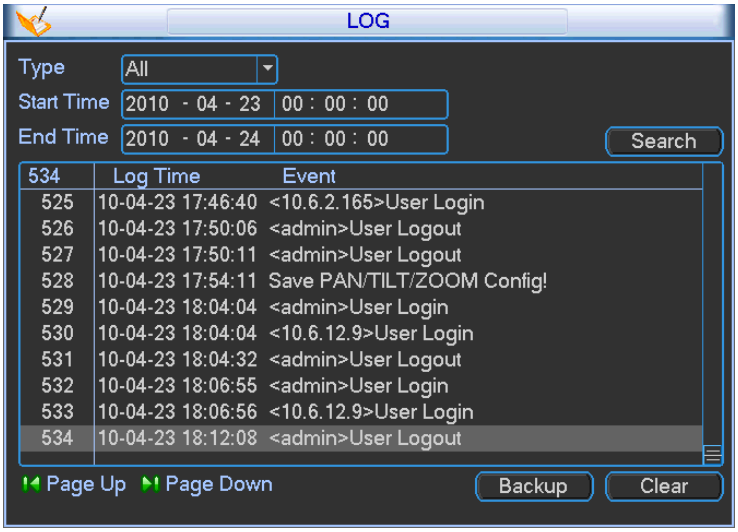


Figure 5-43

5.6.4 Version

Here is for you to view some version information. See Figure 5-44.

- Channel
- Alarm in
- Alarm out
- System version
- Build date
- Web
- SN

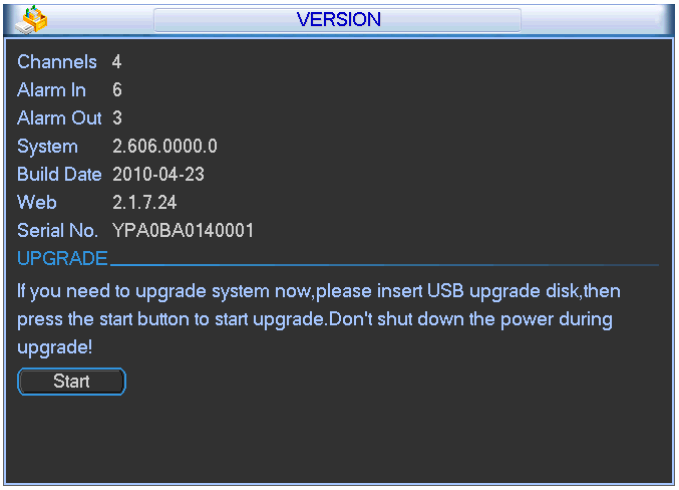


Figure 5-44

5.6.5 Online Users

Here is for you to manage online users. See Figure 5-45.

You can disconnect one user or block one user if you have proper system right. The max period is 65535.

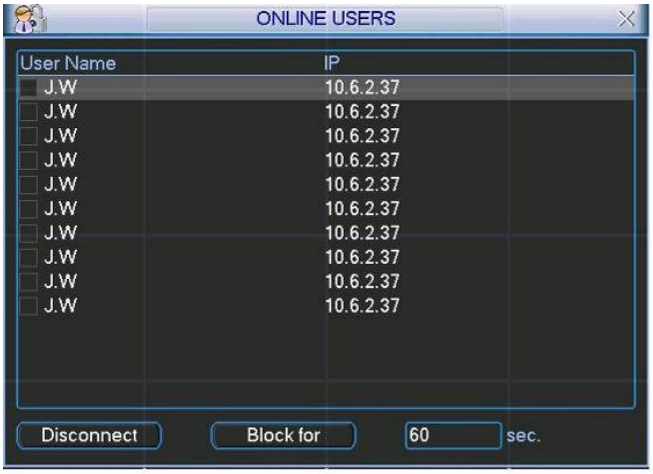


Figure 5-45

5.7 Exit

Double click exit button, system pop up a dialogue box for you to select. See Figure 5-46.

- Logout menu user: log out menu. You need to input password when you login the next time.
- Shutdown: system shuts down and turns off power.
- Restart system: system begins rebooting.
- Switch user: you can use another account to log in.

Important

Always shut down the device properly!

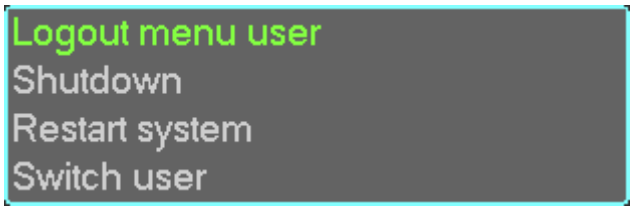


Figure 5-46

6 About Auxiliary Menu

6.1 Go to Pan/Tilt/Zoom Menu

In the one-window surveillance mode, right click mouse (click “fn” Button in the front panel or click AUX key in the remote control). The interface is shown as below: See Figure 6-1.

Figure 6-1

Click Pan/Tilt/Zoom, the interface is shown as in Figure 6-2.

Here you can set the following items:

- Zoom
- Focus
- Iris

Click icon and to adjust zoom, focus and Iris.

Figure 6-2

In Figure 6-2, please click direction arrows (See Figure 6-3) to adjust PTZ position. There are totally eight direction arrows. (Please note there are only four direction arrows in DVR front panel.)

Figure 6-3

6.1.1 3D Intelligent Positioning Key

In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 6-4 . Click this button, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size.

Figure 6-4

Here is a sheet for you reference.

Name	Function key	function	Shortcut key	Function key	function	Shortcut key
Zoom		Near	▶		Far	▶▶
Focus		Near	◀		Far	▶
Iris		close	⏸◀		Open	▶⏸

6.2 Preset /Patrol / Pattern /Border Function

In Figure 6-2 click the set button. The interface is shown as below:

Here you can set the following items:

- Preset
- Patrol
- Pattern
- Border

Figure 6-5

In Figure 6-2, click page switch button, you can see an interface as in Figure 6-6.

Here you can activate the following functions:

- Preset
- Tour
- Pattern
- Auto scan
- Auto pan
- Flip
- Reset
- Page switch

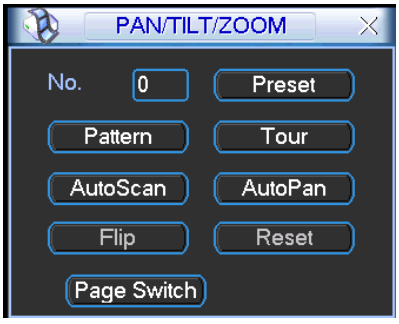


Figure 6-6

6.2.1 Preset Setup

Note: The following setups are usually operated in the Figure 6-2, Figure 6-5 and Figure 6-6.

In Figure 6-2, use eight direction arrows to adjust camera to the proper position.

In Figure 6-5, click preset button and input preset number. The interface is shown as in Figure 6-7.

Add this preset to one patrol number

Figure 6-7

6.2.2 Activate Preset

In Figure 6-6 please input preset number in the No. blank, and click preset button.

6.2.3 Patrol Setup

In Figure 6-5, click patrol button. The interface is shown as in Figure 6-8.

Input preset number and then add this preset to one patrol.

Figure 6-8

6.2.4 Activate Patrol

In Figure 6-6, input patrol number in the No. blank and click patrol button

6.2.5 Pattern Setup

In Figure 6-5, click pattern button and then click begin button. The interface shows like Figure 6-9. Please go to Figure 6-2 to modify zoom, focus, and iris. Go back to Figure 6-9 and click end button.

You can memorize all these setups as pattern 1.

Figure 6-9

6.2.6 Activate Pattern Function

In Figure 6-6 input mode value in the No. blank, and click pattern button.

6.2.7 Border Setup

In Figure 6-5, click border button. The interface is shown as in Figure 6-10.

Please go to Figure 6-2, use direction arrows to select camera left limit, and then please go to Figure 6-10 and click left limit button

Repeat the above procedures to set right limit.

Figure 6-10

6.2.8 Activate Border Function

In Figure 6-6, click auto scan button, the system begins auto scan. Correspondingly, the auto scan button changes to stop button.

Click stop button to terminate scan operation.

6.3 Flip

In Figure 6-6, click page switch button, you can see an interface is shown as below. See Figure 6-11. Here you can set auxiliary function.

Click page switch button again, system goes back to Figure 6-2.

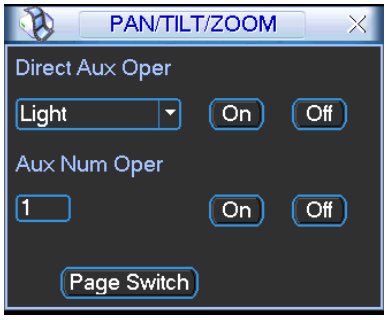


Figure 6-11

7 WEB OPERATION

Please note, all the operation here in Chapter 7 is based on our 4-ch DVR.
Slightly difference maybe found in the user interface.

7.1 Network Connection

Before web operation, please check the following items:

- Network connection is right
- DVR and PC network setup is right. Please refer to network setup(main menu->setting->network)
- Use order ping ***.***.***.***(* DVR IP address) to check connection is OK or not. Usually the return TTL value should be less than 255.
- System is compatible with WIN VISTA web control right now. But you need to disable user account control function. Double click user account and then disable user account control. After completing setup, please reboot the PC.
- System can automatically download latest web control and the new version can overwrite the previous one.
- If you want to un-install the web control, please run uninstall web.bat. Please note, before you un-install, please close all web pages, otherwise the un-installation might result in error.

7.2 Main Window

Open IE and input DVR address in the address column. For example, if your DVR IP is 10.10.3.16, then please input http:// 10.10.3.16 in IE address column. See Figure 7-1

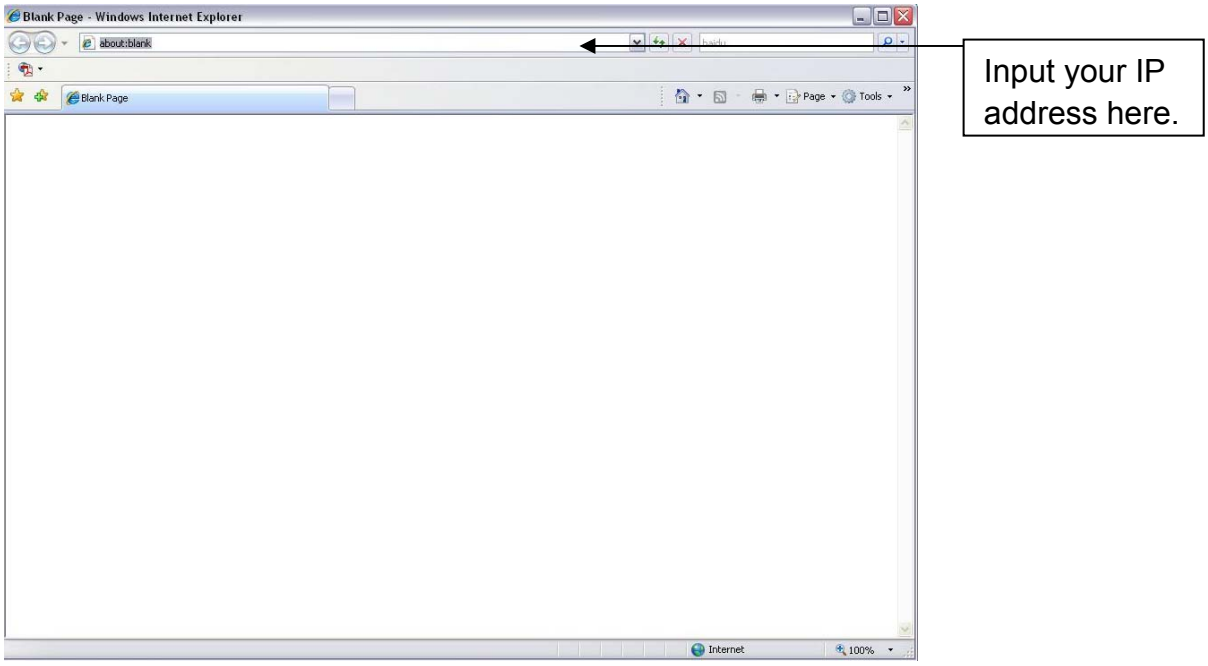


Figure 7-1

System pops up warning information to ask you whether install webrec.cab control or not. Please click yes button.
If you can't download the ActiveX file, please modify your settings as follows. See Figure 7-2.

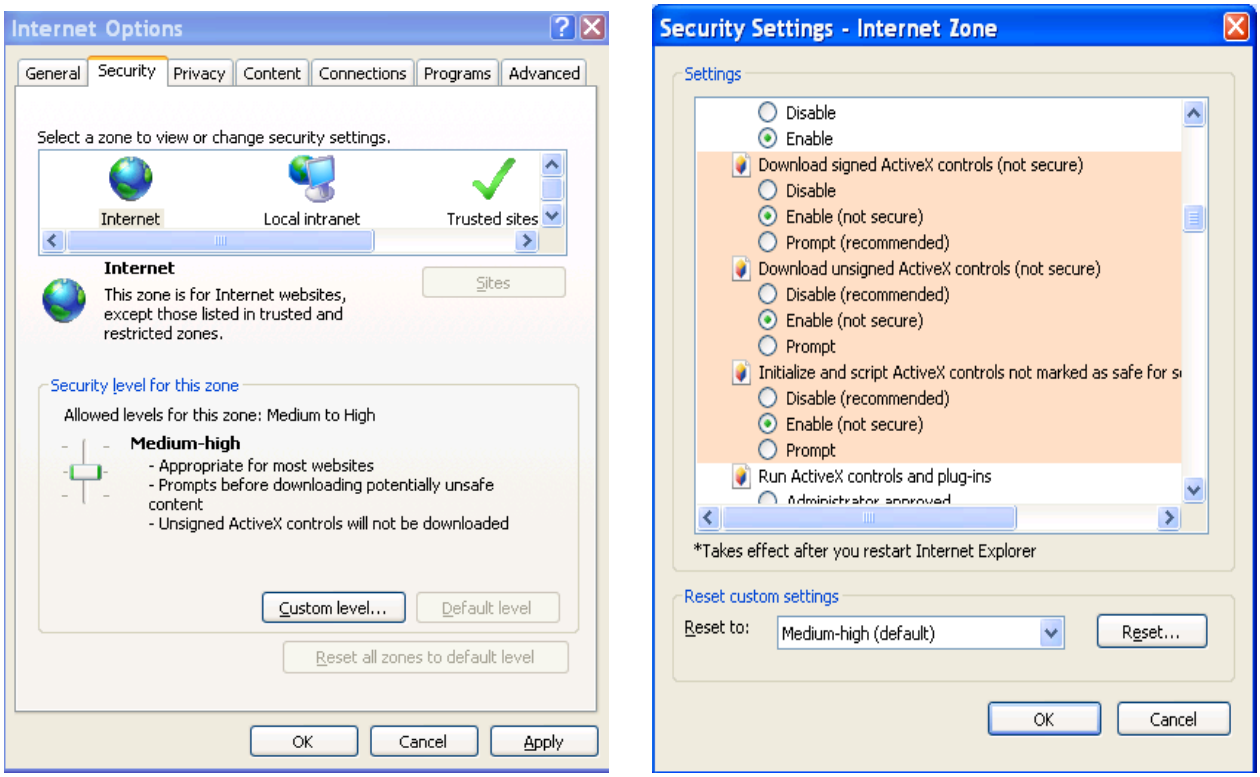


Figure 7-2

After installation, the interface is shown as below. See Figure 7-3.

Please input your user name and password.

Default factory name is admin and password is admin.

Note: For security reasons, please modify your password after you first login.

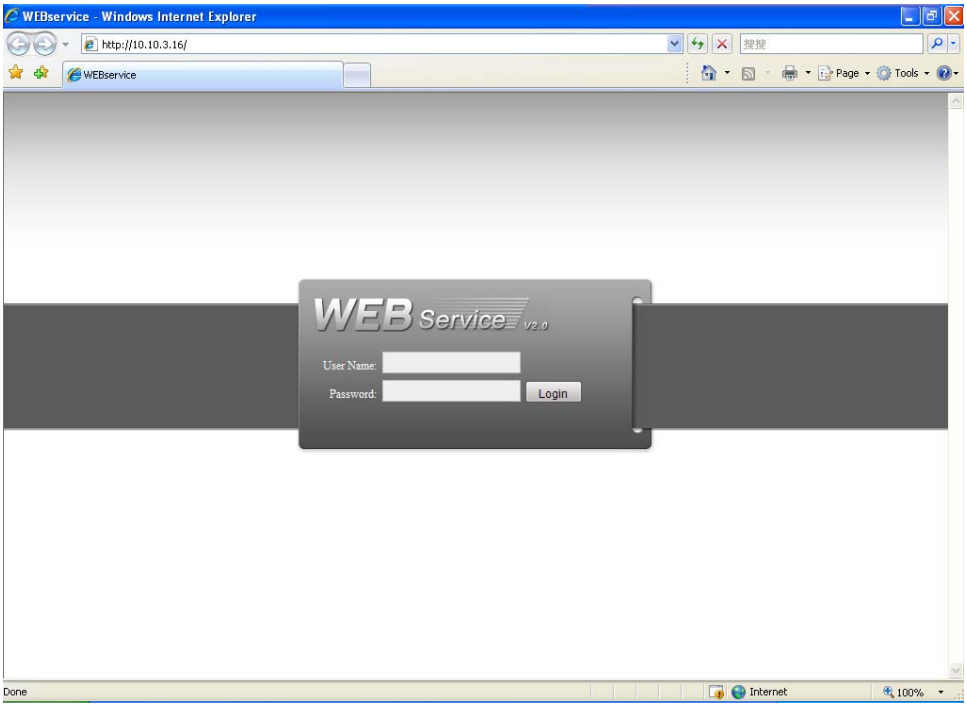


Figure 7-3

After you logged in, you can see the main window. See Figure 7-6.

This main window can be divided into the following sections.

- Section 1: there are five function buttons: configuration (Chapter 7.3), search (Chapter 7.4), alarm (Chapter 7.5), about (Chapter 7.6), log out (Chapter 7.7).
- Section 2: there are channel number and three function buttons: refresh, start dialog and local play.
- Section3: there are PTZ (Chapter 7.2.2), color (Chapter 7.2.3) button and you can also select picture path and record path.
- Section 4:real-time monitor window. Please note current preview window is circled by a green rectangle zone.
- Section 5: Here you can view window switch button. You can also select video priority between fluency or real-time.
  - ✧ System monitor window switch supports full screen/1-window/4-window/6-window/8-window/9-window/13-window/16-window/20-window/25-window/36-window. See Figure 7-4.

Figure 7-4

✧ Preview window switch. System support 1/4-window real-time preview. Please you need to have the proper rights to implement preview operation. You can not preview if you have no right to preview the either channel. See Figure 7-5.

Figure 7-5

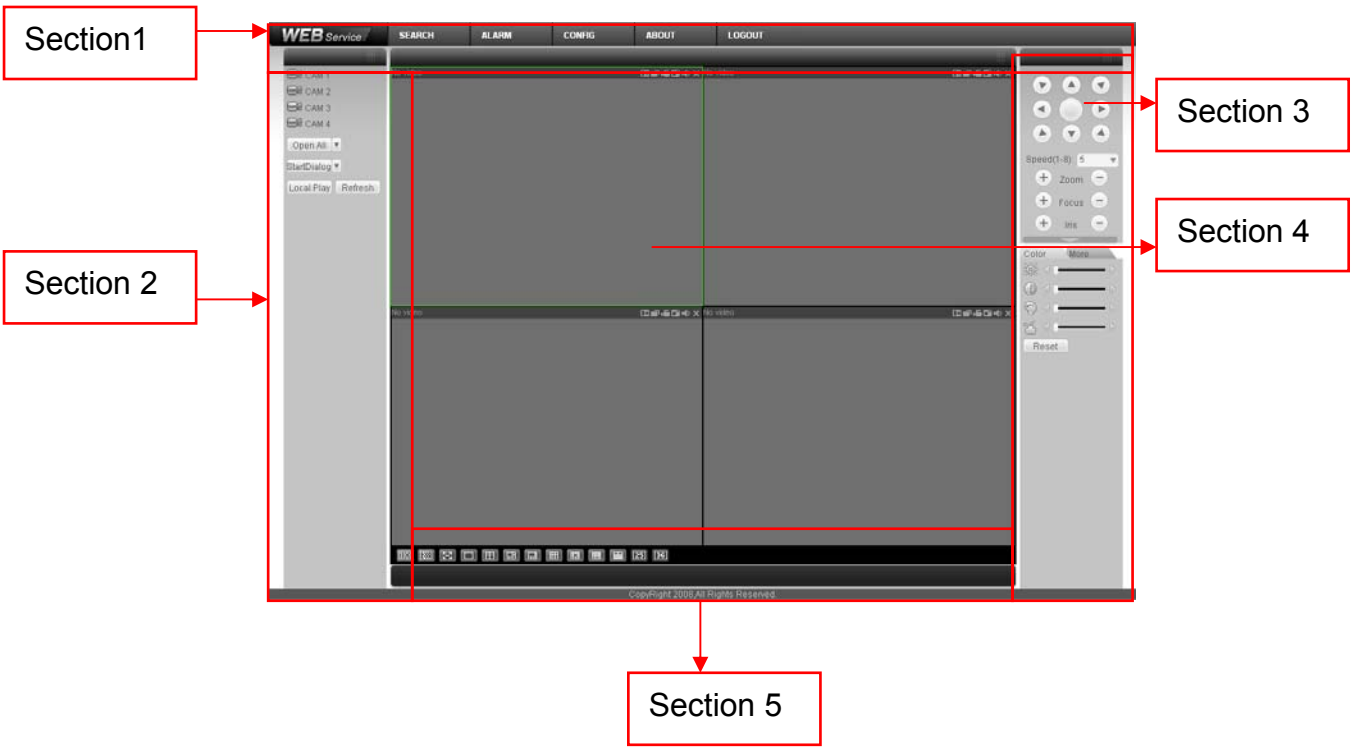


Figure 7-6

7.2.1 Real-time Monitor

In section 2, left click the channel name you want to view, you can see the corresponding video in current window.

For detailed function key information, please refer to Figure 7-7.

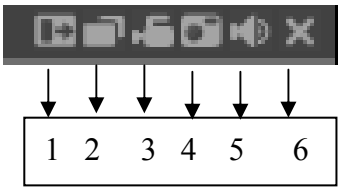


Figure 7-7

- 1: Digital zoom: Click this button and then left drag the mouse in the zone to zoom in. right click mouse system restores original status.
- 2: Change show mode: resize or switch to full screen mode.
- 3: Local record. When you click local record button, the system begins recording and this button becomes highlighted. You can go to system -.local record to set video file path.
- 4: Capture picture. You can snapshoot important video. All images are memorized in system client folder \download\picture (default).
- 5: Audio :Turn on or off audio.(It has no relationship with system audio setup)
- 6: Close video.

Please refer to Figure 7-8 for main stream and extra stream switch information.

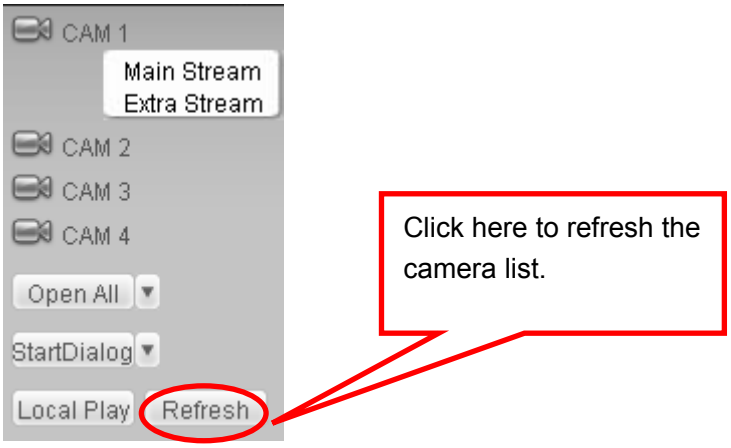


Figure 7-8

Open All

You can click it to open all channels.

Refresh

You can use button to refresh camera list.

Start Dialogue

You can click this button to enable audio talk.

Local Play

Click local play button, system pops up the following interface for you to select local play file. See Figure 7-9.

Figure 7-9

7.2.2 PTZ

Before PTZ operation, please make sure you have properly set PTZ protocol. (Please refer to Chapter 7.3.2.8 Pan/Tilt/Zoom).

Click PTZ button, the interface is shown as in Figure 7-10 .

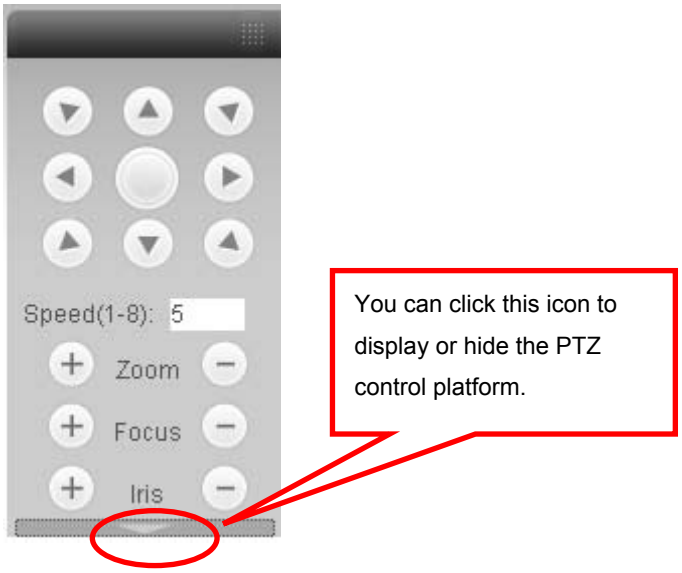


Figure 7-10

7.2.2.1 Direction key and 3D positioning key

In Figure 7-10, there are eight direction keys.

In the middle of the eight direction keys, there is a 3D intelligent positioning key.

Click SIT button, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. It can realize PTZ automatically.

7.2.2.2 Speed

System supports eight-level speed. You can select from the dropdown list. Speed 2 is faster than speed 1.

7.2.2.3 Zoom/Focus/Iris

Here is a sheet for you reference.

Name	Function key	Function	Function key	Function
Zoom		Near		Far
Focus		Near		Far
Iris		close		Open

Then click triangle icon in Figure 7-10, you can see the following interface. See Figure 7-11.

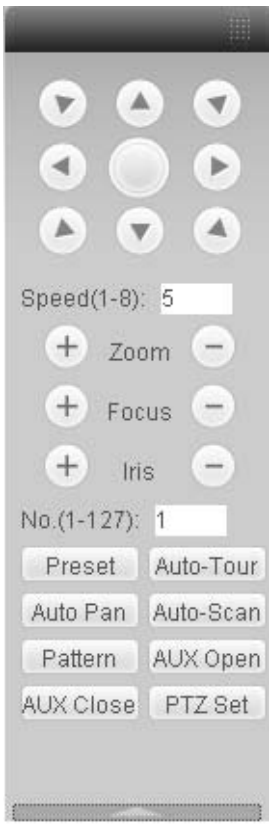


Figure 7-11

In Figure 7-11, click PTZ setup button you can see the following interface. See Figure 7-12.

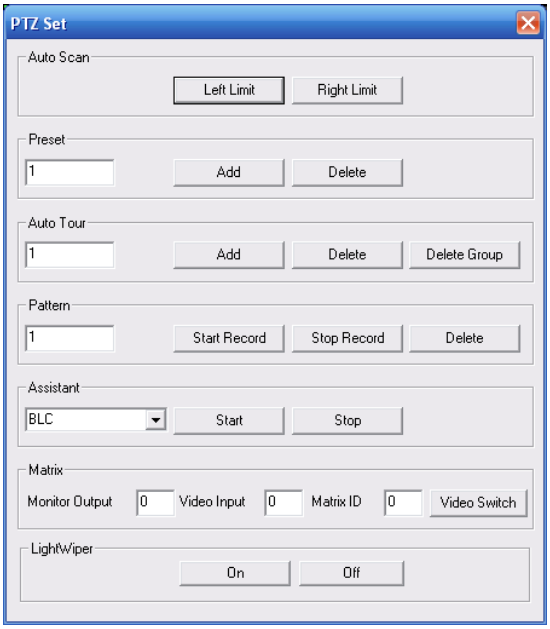


Figure 7-12

7.2.2.4 Auto Scan

In Figure 7-12, move the camera to you desired location and then click left limit button. Then move the camera again and then click right limit button to set a right limit.

7.2.2.5 Pattern

In Figure 7-12, you can input pattern value and then click start record button to begin PTZ movement. Please go back to Figure 7-11 to implement camera operation. Then you can click stop record button. Now you have set one pattern.

7.2.2.6 Preset

In Figure 7-12, move the camera to your desired location and then input preset value. Click add button, you have set one preset.

7.2.2.7 Auto tour

In Figure 7-12, input auto tour value and preset value. Click add button, you have added one preset in the tour.

Repeat the above procedures you can add more presets in one tour.

7.2.2.8 Matrix

Here you can select monitor output channel, video input channel, matrix number.

7.2.2.9 Assistant

You can select the assistant item from the dropdown list. See Figure 7-13. The options include: backlight compensation (BLC), digital zoom, night vision, camera brightness, flip.

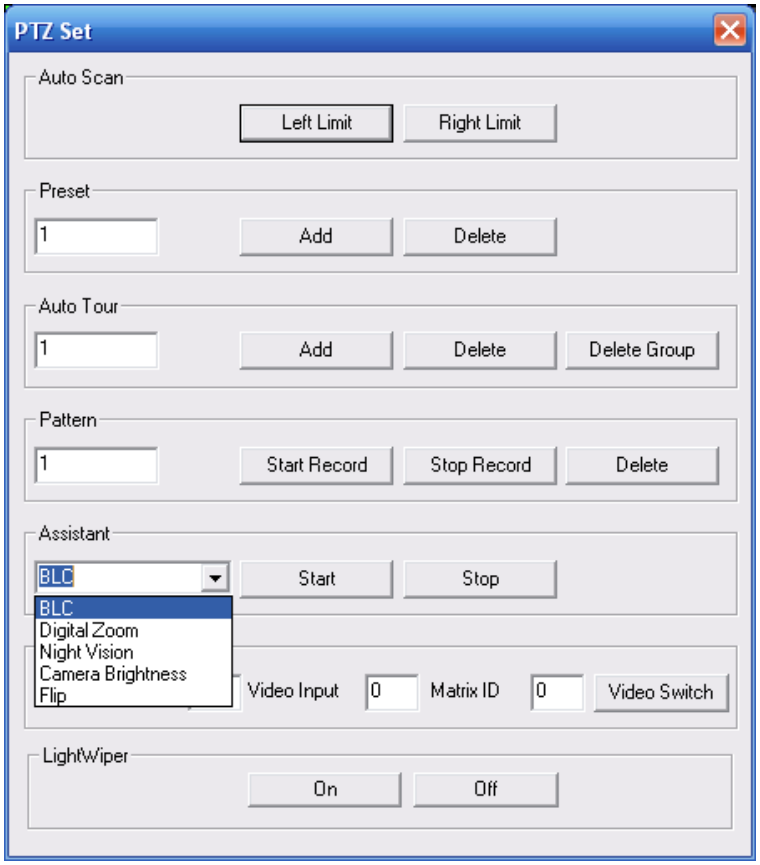


Figure 7-13

7.2.2.10 Light/Wiper

Here you can enable or disable light/wiper function.

7.2.3 Color

Click color button in section 3, the interface is shown as Figure 7-14.
Here you can select one channel and then adjust its brightness, contrast, hue and saturation. (Current channel border becomes green).
Or you can click default button to use system default setup.

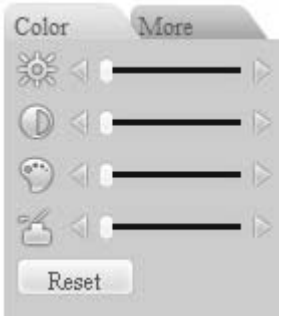


Figure 7-14

7.2.4 Picture Path/Record Path/Reboot

Click more button in Figure 7-14, you can see an interface is shown as in Figure 7-15.

Figure 7-15

Click picture path button, you can see an interface is shown as in Figure 7-16.

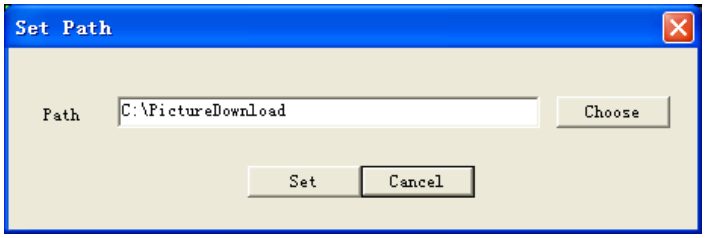


Figure 7-16

Click record path button, you can see an interface is shown as in Figure 7-17.

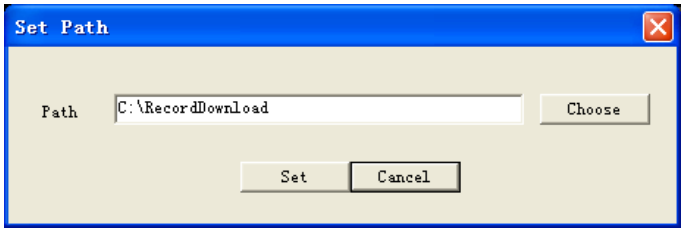


Figure 7-17

Click reboot button, system pops up the following dialogue box. See Figure 7-18,
Please click OK to reboot.

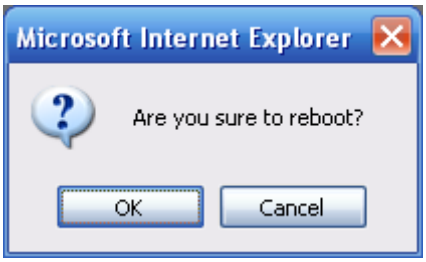


Figure 7-18

If there is local use logged in the system menu, or the Web logged in user has no right to reboot the device system pops up a dialogue box to alert you.

7.3 Configure

In the main window, click config button, you can see an interface is shown as in Figure 7-19.

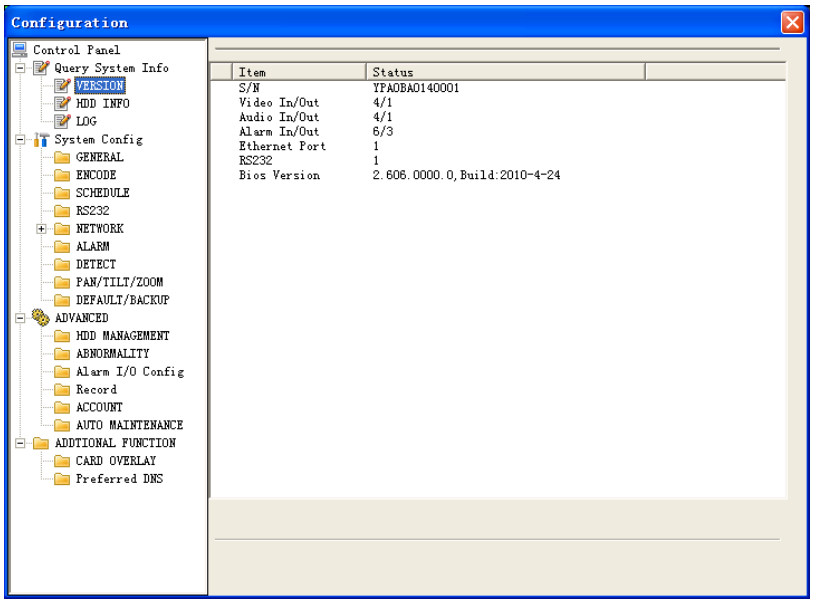


Figure 7-19

7.3.1 System Information

Click device configuration button, you can see the following interface. See Figure 7-20.

It includes the following items:

- Version
- HDD information
- Log

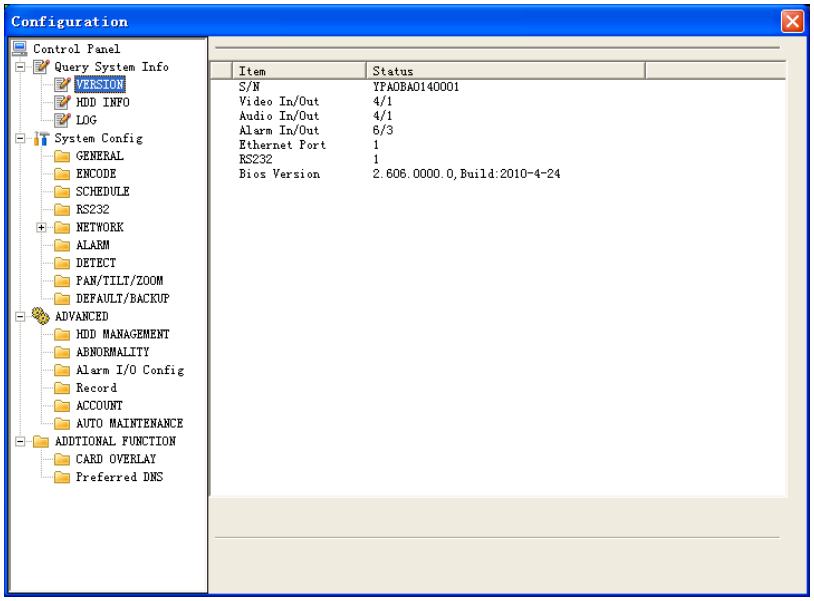


Figure 7-20

7.3.1.1 Version

Click version button, you can see following information for your reference. See Figure 7-21.

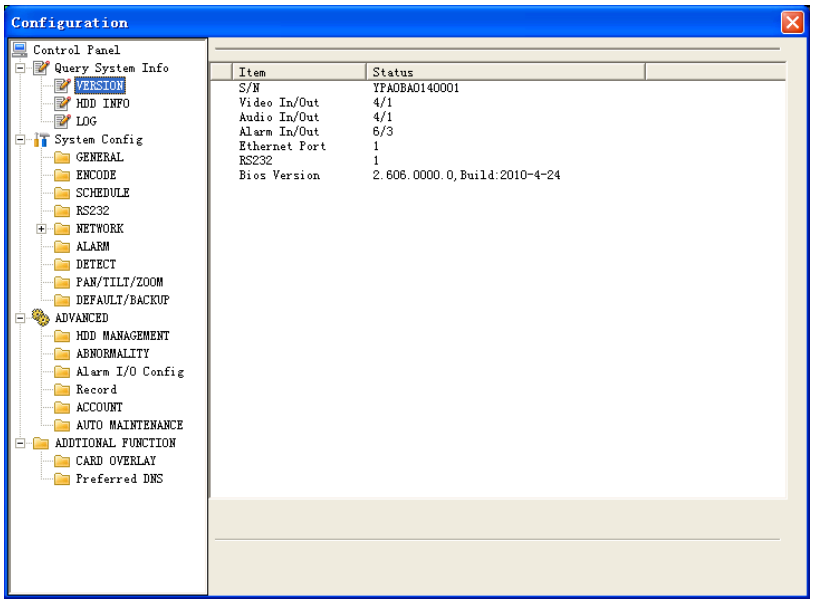


Figure 7-21

7.3.1.2 HDD Information

Here you can view HDD amount, HDD status, total volume and free space, record time period. See Figure 7-22.

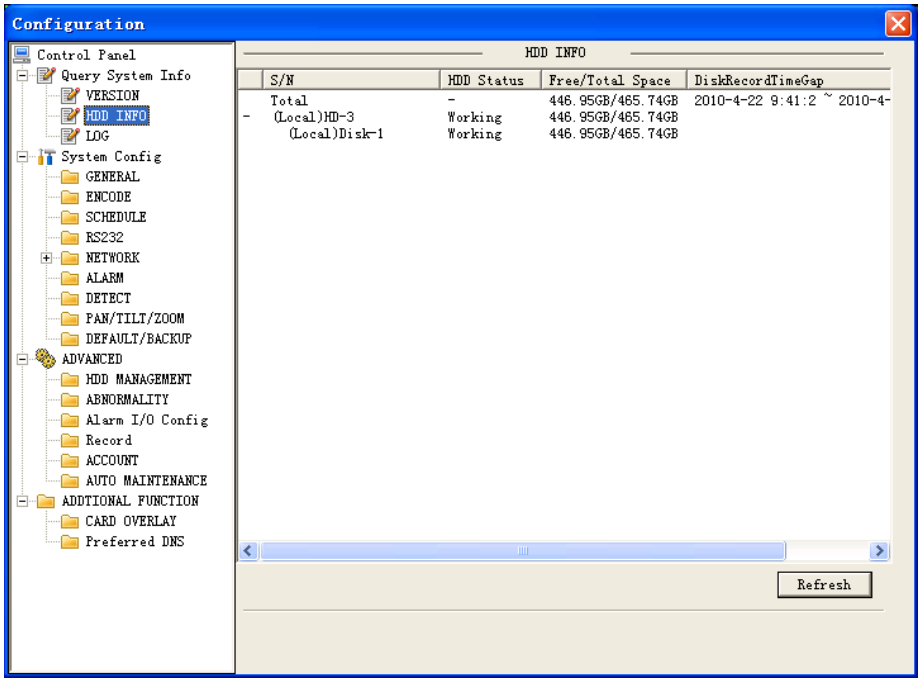


Figure 7-22

7.3.1.3 Log

Click log button, you can see an interface is shown as in Figure 7-23. Here you can view current device log information.

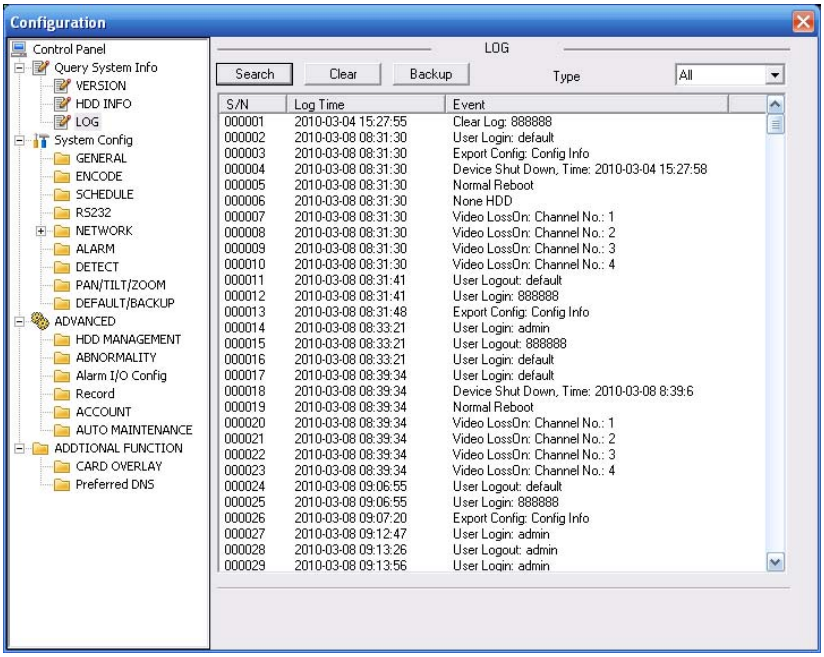


Figure 7-23

Click backup button, the interface is shown as in Figure 7-22.

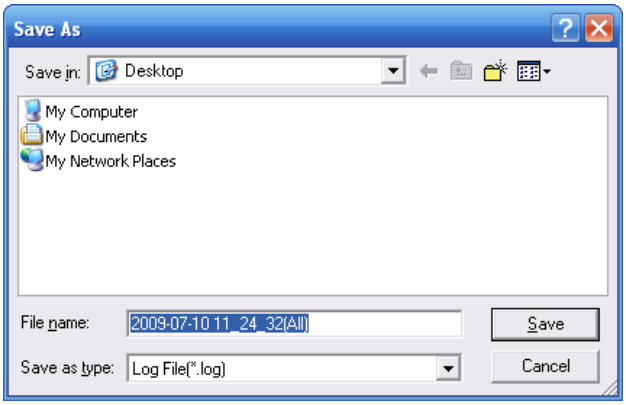


Figure 7-24

Please refer to the following sheet for log parameter information.

Parameter	Function
Type	Log types include: system operation, configuration operation, data management, alarm event, record operation, user management, log clear and file operation.
Search	You can select log type from the drop down list and then click search button to view the list.
Clear	You can click this button to delete all displayed log files. Please note system does not support clear by type.
Backup	You can click this button to backup log files to current PC.

7.3.2 Configuration

System configuration includes the following items:

- General
- Encode
- Schedule
- RS232
- Network
- Alarm
- Detect
- Pan/Tilt/Zoom
- Default/Backup

7.3.2.1 General

General interface is shown as in Figure 7-25.

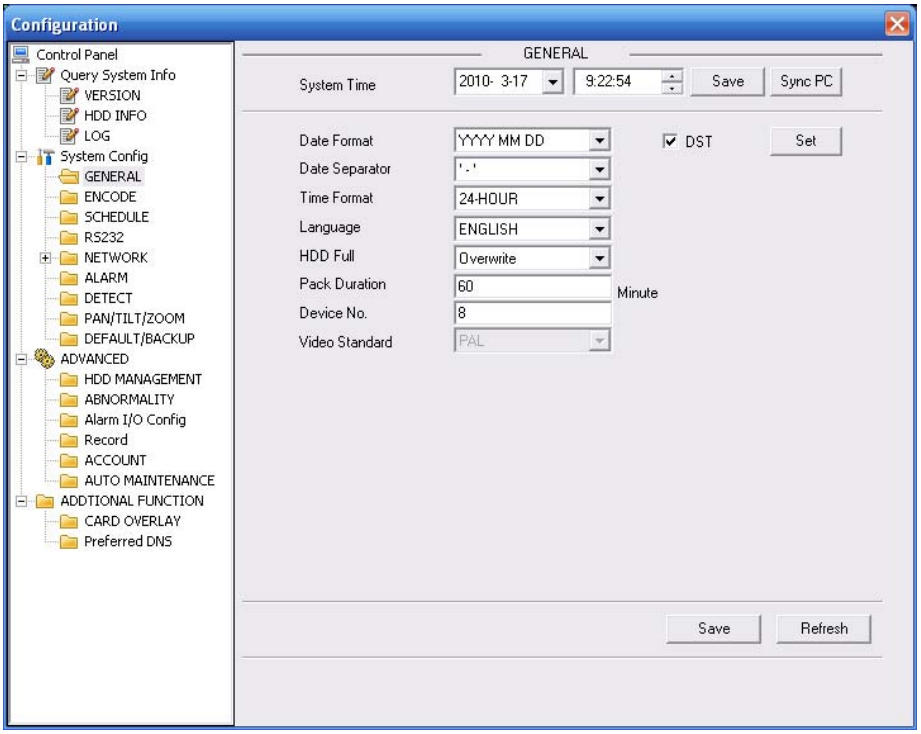


Figure 7-25

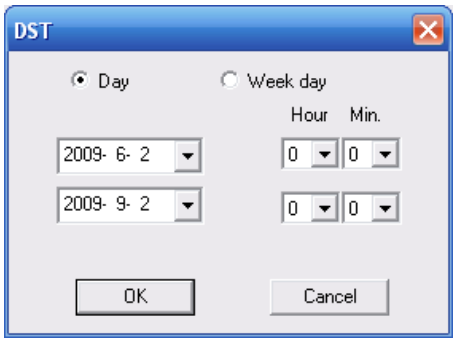


Figure 7-26

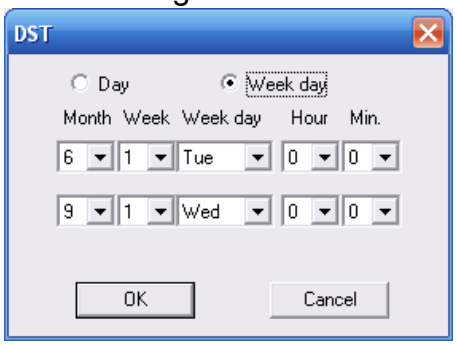


Figure 7-27

Please refer to the following sheet for detailed information.

Parameter	Function
System Time	Here is for you to modify system time. Please click Save button after your completed modification
Sync PC	You can click this button to save the system time as your PC current time.

Data Format	Here you can select data format from the dropdown list.
Data Separator	Please select separator such as – or /.
Time Format	There are two options: 24-H and 12-H.
DST	Here you can set day night save time begin time and end time. See Figure 7-28 and Figure 7-29.
Language	You can select the language from the dropdown list. Device needs to reboot to get the modification activated.
HDD Full	There are two options: stop recording or overwrite the previous files when HDD is full. When current working HDD is overwriting or it is full now, system stops record. If current working HDD is full now, system goes to overwrite the previous file.
Pack Duration	Here you can select file size. The value ranges from 1 to 120.Default setup is 60 minutes.
Device No	When you are using one remote control (not included in the accessory bag) to manage multiple devices, you can give a serial numbers to the device.
Video Standard	There are two options: PAL/NTSC. Please note, for the Web user, this information is for reference only. You can not modify.

7.3.2.2 Encode

Encode setup includes the following items. See Figure 7-28.

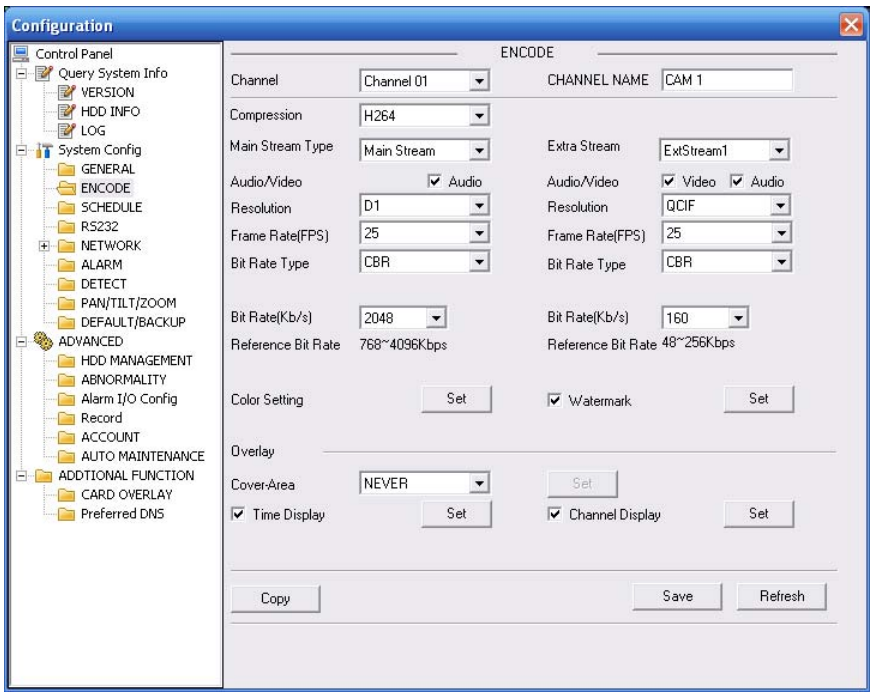


Figure 7-28

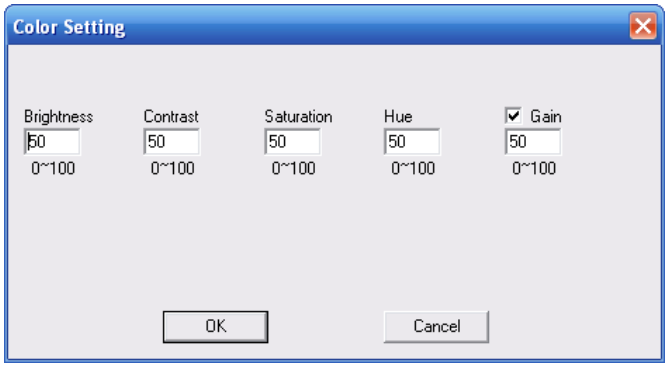


Figure 7-29

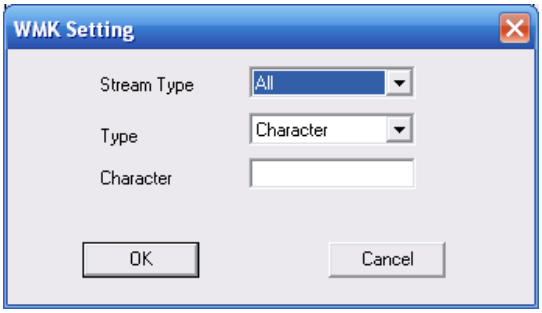


Figure 7-30

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	Here is for you to select a monitor channel.
Channel Name	Here is to display current channel name. You can modify it.
Compression	H.264
Main Stream	Right now there is main stream only.
Audio/Video	For the main stream, recorded file only contains video by default. You need to draw a circle here to enable audio function. For extra stream, you need to draw a circle to select the video first and then select the audio if necessary.
Resolution	D1/HD1/BCIF/CIF/QCIF
Frame Rate	You can select from the dropdown list. The higher the frame rate, the better the video quality.
Bit Rate Type	There are two options: VBR and CBR. Please note, you can set video quality in VBR mode only.
Quality	The value ranges from 1 to 6. The level 6 is the best video quality.
Bit Rate	In CBR, the bit rate here is the max value. In dynamic video, system needs to low frame rate or video quality to guarantee the value. The value is null in VBR mode. Please refer to recommend bit rate for the detailed information.
Recommended Bit	Recommended bit rate value according to the resolution and frame rate you have set.

Parameter	Function
Color Setting	Here you can set video brightness, contrast ness, hue, saturation and gain. The value ranges from 0 to 100.Default value is 50. See Figure 7-29.
Watermark	Click watermark set button, the interface is shown as in Figure 7-30. System now supports character only. For detailed watermark information, please refer to Chapter 7.4.3 Watermark.
Cover area (privacy mask)	Here you can privacy mask the specified video in the monitor video. The privacy mask includes four options: Never/monitor/preview/all. • Never: It means do not enable privacy mask function. • Monitor: The privacy mask zone can not be viewed in monitor mode. • Preview: The privacy mask zone can not be viewed in preview mode. • All: The privacy mask zone can not be viewed in both monitor and preview mode.
Time Title	You can enable this function so that system overlays time information in video window. OSD transparent value ranges from 0 to 255. 0 means complete transparent. You can use the mouse to drag the time tile position.
Channel Title	You can enable this function so that system overlays channel information in video window. OSD transparent value ranges from 0 to 255. 0 means complete transparent. You can use the mouse to drag the channel tile position.
Copy	It is a shortcut menu button. You can copy current channel setup to one or more channels. The interface is shown as in Figure 7-33.
Save	You can click save button after you complete setup for one channel, or you can complete the whole setups and then click save button.
Refresh	Click this button to get device latest configuration information.

7.3.2.3 Schedule

Schedule includes the following interface. See Figure 7-31.

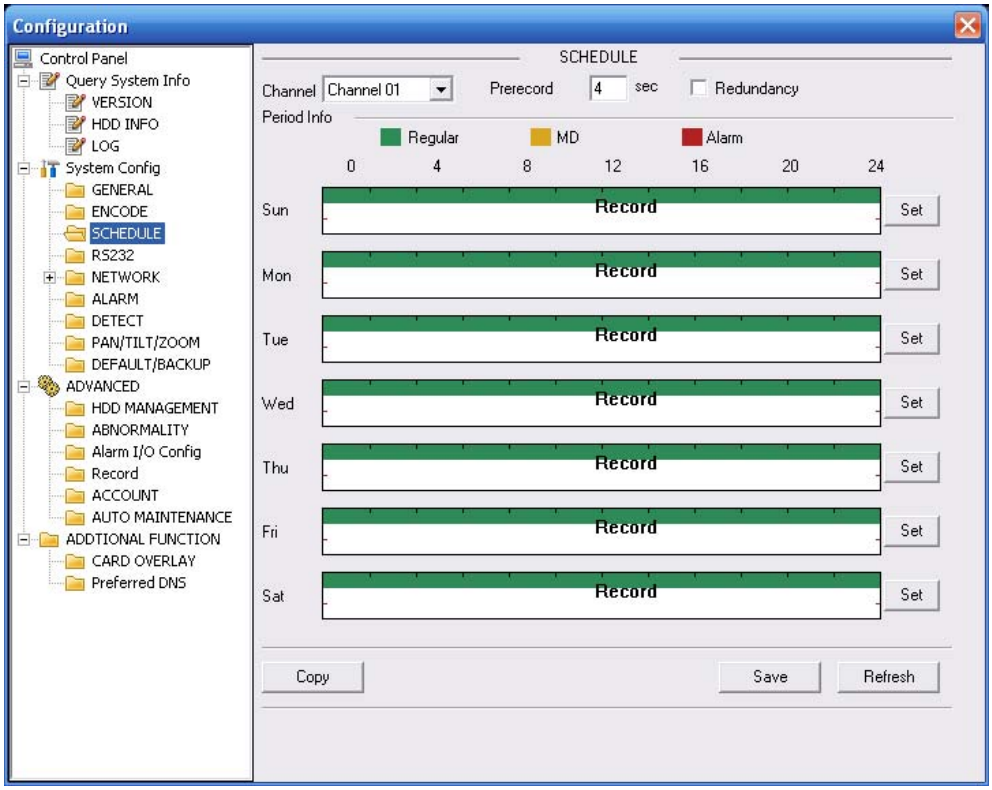


Figure 7-31

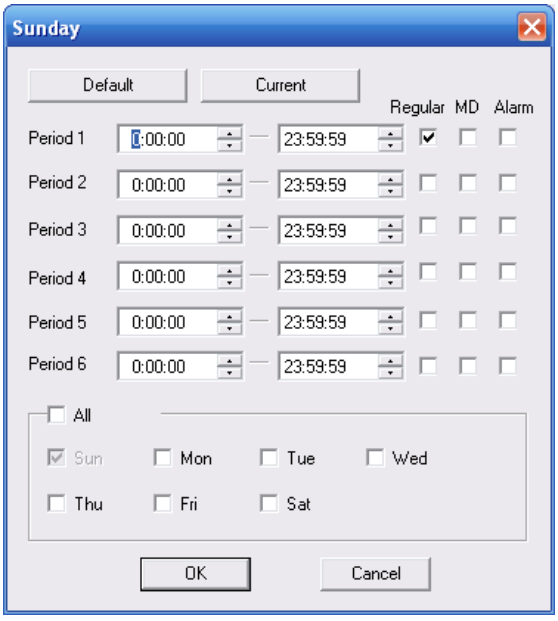


Figure 7-32

Tip:

After you finished setup for one channel, you can click “save as” button, system pops up the following interface. See Figure 7-33.Now you can copy one channel setup to other channels.

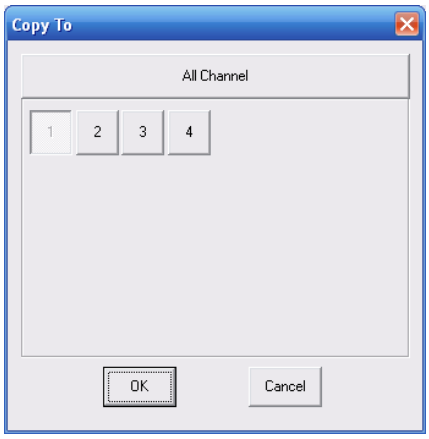


Figure 7-33

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	Please select a channel first.
Pre-record	Please input pre-record value here. System can record the three to five seconds video before activating the record operation into the file. (Depends on data size).
Setup	In Figure 7-31, click set button, you can go to the corresponding setup interface. See Figure 7-32. Please set schedule period and then select corresponding record or snapshot type: schedule/snapshot, motion detection/snapshot, and alarm/snapshot. Please select date (Current setup applies to current day by default. You can draw a circle before the week to apply the setup to the whole week.) After complete setup, please go back to Figure 7-31 and then click save to save current time period setup.
Copy	It is a shortcut menu button. You can copy current channel setup to one or more (all) channels. The interface is shown as in Figure 7-33.
Save	You can click save button after you complete setup for one channel, or you can complete the whole setups and then click save button.
Refresh	Click this button to get device latest configuration information.

7.3.2.4 Network

Network interface is shown as in Figure 7-34.

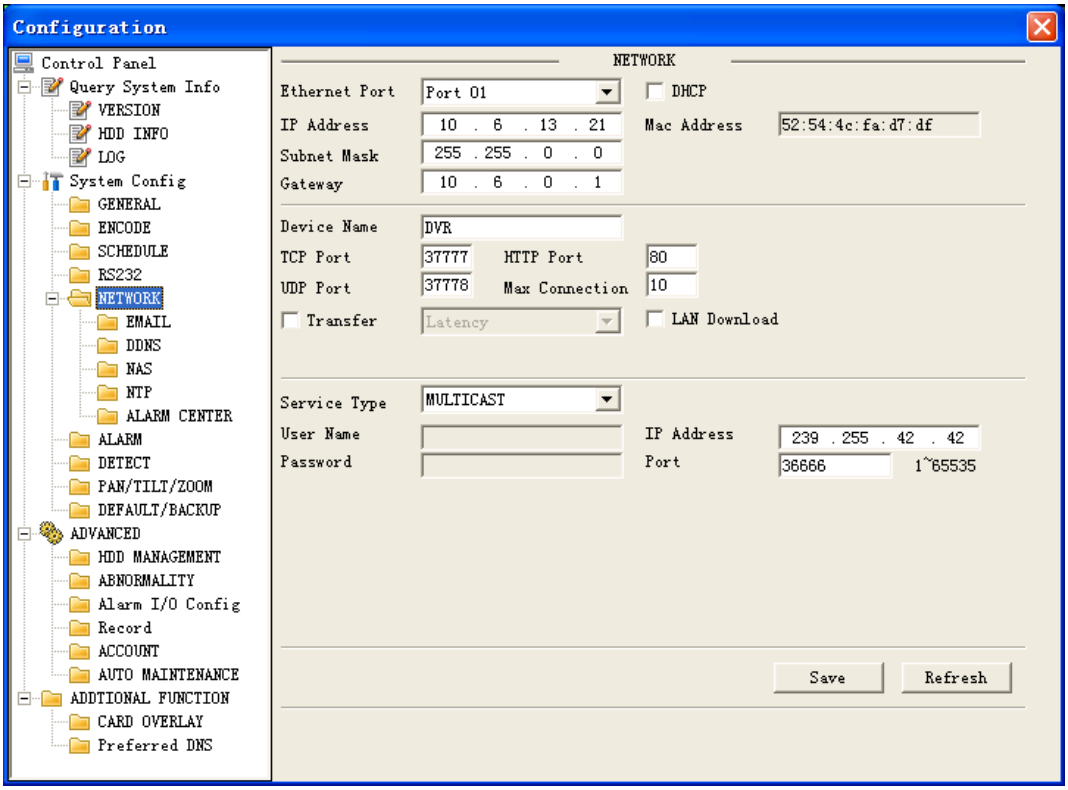


Figure 7-34

Please refer to the following sheet for detailed information.

Parameter		Function
Ethernet		Please select the network card first.
DHCP		Dynamically get IP address. You can get the device IP from the DHCP server if you enabled this function.
TCP Port		Default value is 37777.
HTTP Port		Default value is 80.
UDP Port		Default value is 37778.
Max Connection		Network user max amount. The value ranges from 0 to 10. O means there is no user can access current device.
Remote Host	Multiple cast group	● Set MULCAST address and port. ● Enable MULCAST function. For detailed information, please refer to Chapter 5.3.5.3 MULCAST.
	PPPOE	Input the PPPoE user name and password you get from the IPS (internet service provider) and enable PPPoE function. Please save current setup and then reboot the device to get the setup activated. Device connects to the internet via PPPoE after reboot. You can get the IP address in the WAN from the IP address column. Please note if you want to reboot the device, please make sure you have proper reboot right and there is no login user in current device.

Email

The email interface is shown as in Figure 7-35.

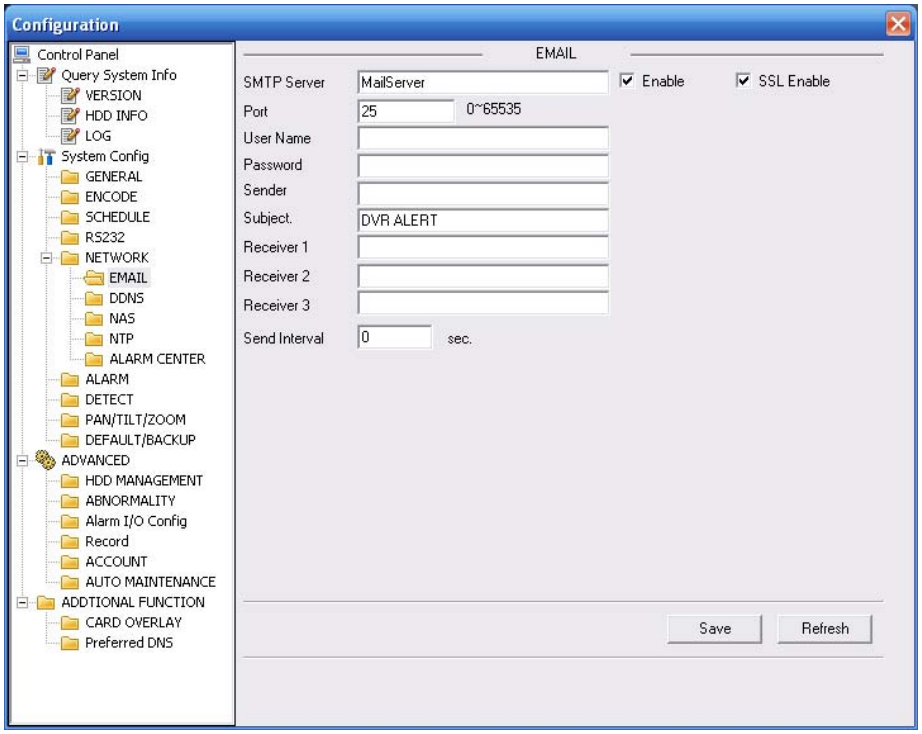


Figure 7-35

Please refer to the following sheet for detailed information.

Parameter	Function
SMTP Server	Input server address and then enable this function.
SSL enable	Here you can enable SSL function.
Port	Default value is 25. You can modify it if necessary.
User Name	The sender email account user name.
Password	The sender email account password.
Sender	Sender email address.
Subject	Input email subject here.
Address	Input receiver email address here. Max input three addresses.

DDNS

The DDNS interface is shown as in Figure 7-36.

Please make sure your DVR support this function.

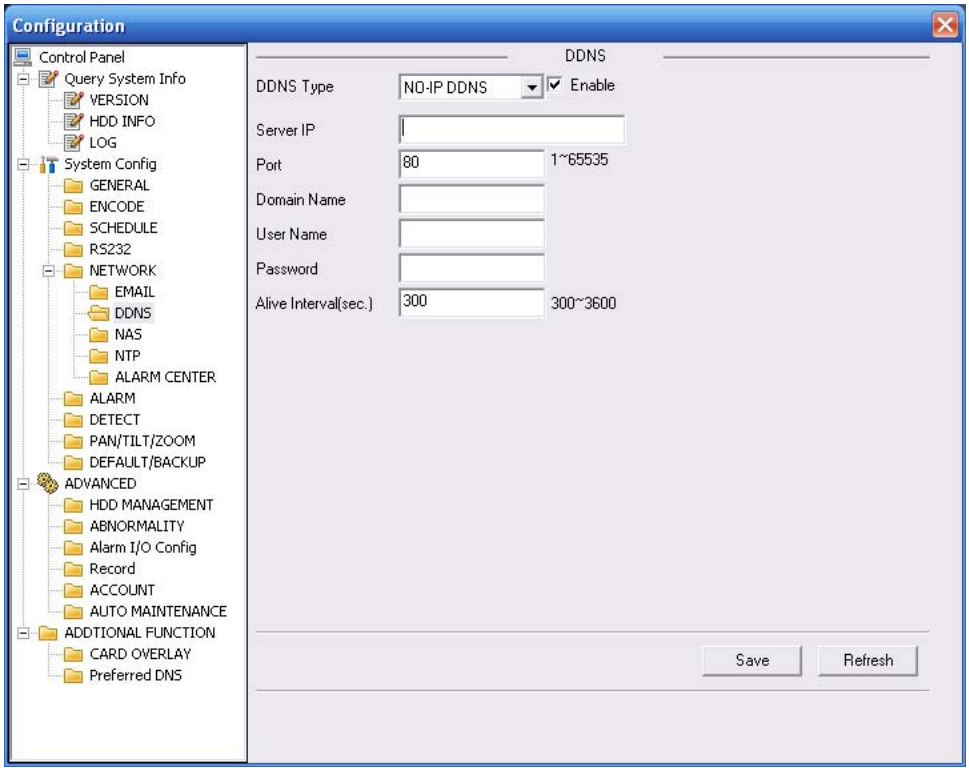


Figure 7-36

Please refer to the following sheet for detailed information.

Parameter	Function
Server Type	You can select DDNS protocol from the dropdown list and then enable DDNS function. The private DDNS protocol means you use your self-defined private protocol to realize DDNS function.
Server IP	DDNS server IP address
Server Port	DDNS server port.
Domain Name	Your self-defined domain name.
User	The user name you input to log in the server.
Password	The password you input to log in the server.
Interval	Device sends out alive signal to the server regularly. You can set interval value between the device and DDNS server here.

NAS

NAS interface is shown as in Figure 7-37.

Please make sure your DVR support this function.

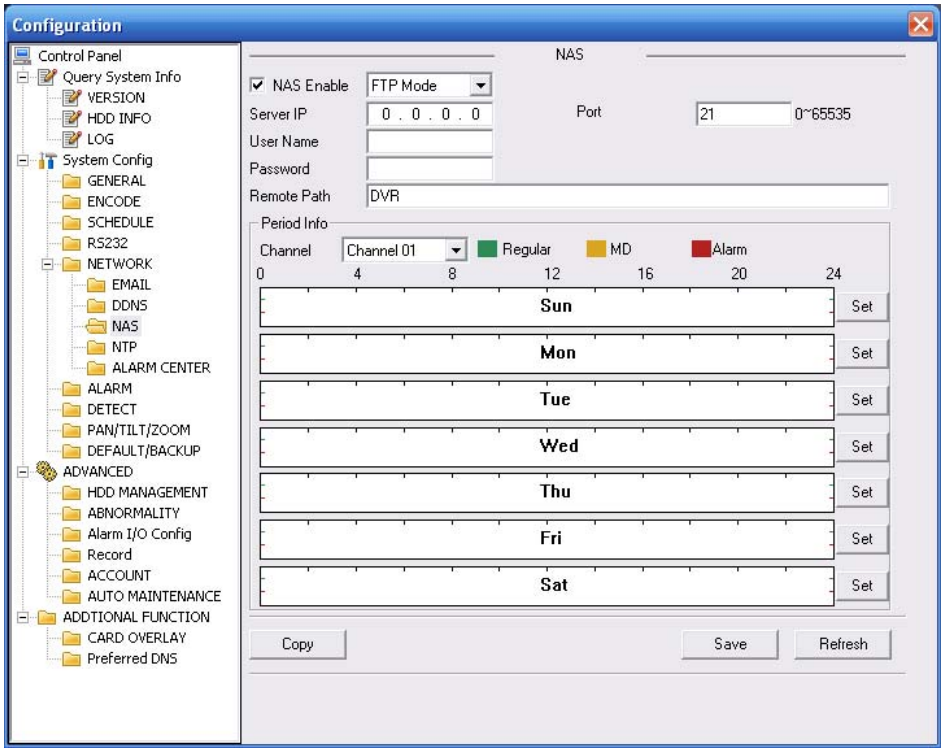


Figure 7-37

Please refer to the following sheet for detailed information.

Parameter	Function
NAS enable	Please select network storage protocol and then enable NAS function.
Server IP	Input remote storage server IP address.
Port	Input Remote storage server port number.
User Name	Log in user account.
Password	The password you need to log in the server.
Remote Path	Remote storage file path.
Save	You can click save button after you complete setup for one channel, or you can complete the whole setups and then click save button.
Refresh	Click this button to get device latest configuration information.

NTP

The NTP interface is shown as in Figure 7-38.

Here you can realize network time synchronization. Please enable current function and then input server IP, port number, time zone and update interval. Please note the SNTP supports TCP transmission only and its port shall be 123.The update interval ranges from 1 to 65535. Default value is 10 minutes.

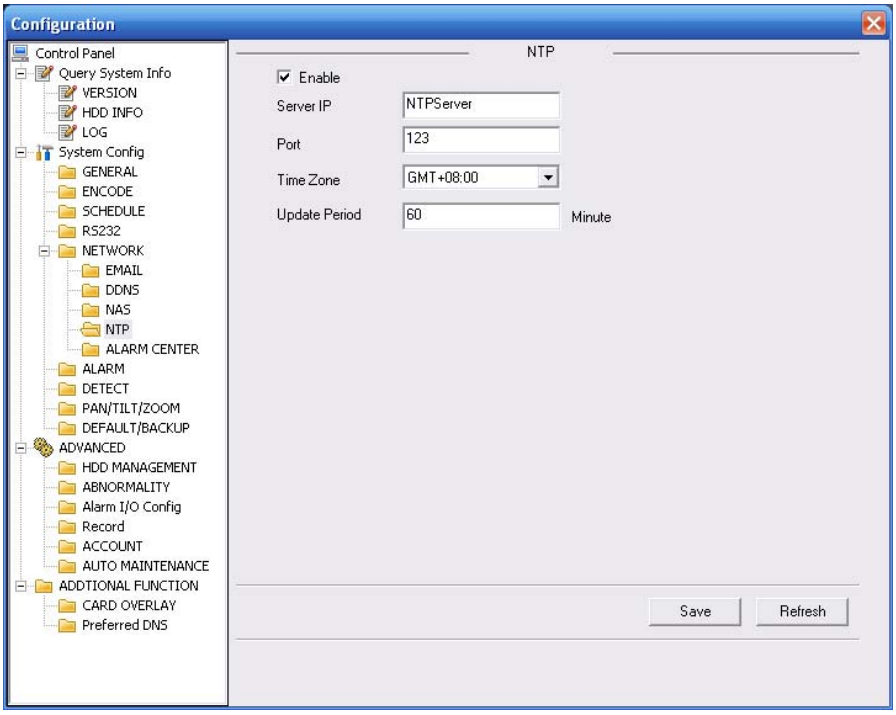


Figure 7-38

You can refer to the following sheet for time zone information.

City /Region Name	Time Zone
London	GMT+0
Berlin	GMT+1
Cairo	GMT+2
Moscow	GMT+3
New Deli	GMT+5
Bangkok	GMT+7
Beijing (Hong Kong)	GMT+8
Tokyo	GMT+9
Sydney	GMT+10
Hawaii	GMT-10
Alaska	GMT-9
Pacific Time(P.T)	GMT-8
American Mountain Time(M.T)	GMT-7
American Central Time(C.T)	GMT-6
American Eastern Time(E.T)	GMT-5
Atlantic Time	GMT-4
Brazil	GMT-3
Middle Atlantic Time	GMT-2

Alarm Centre

Alarm centre interface is shown as below. See Figure 7-39.

Please check the box and then input server IP and port value.

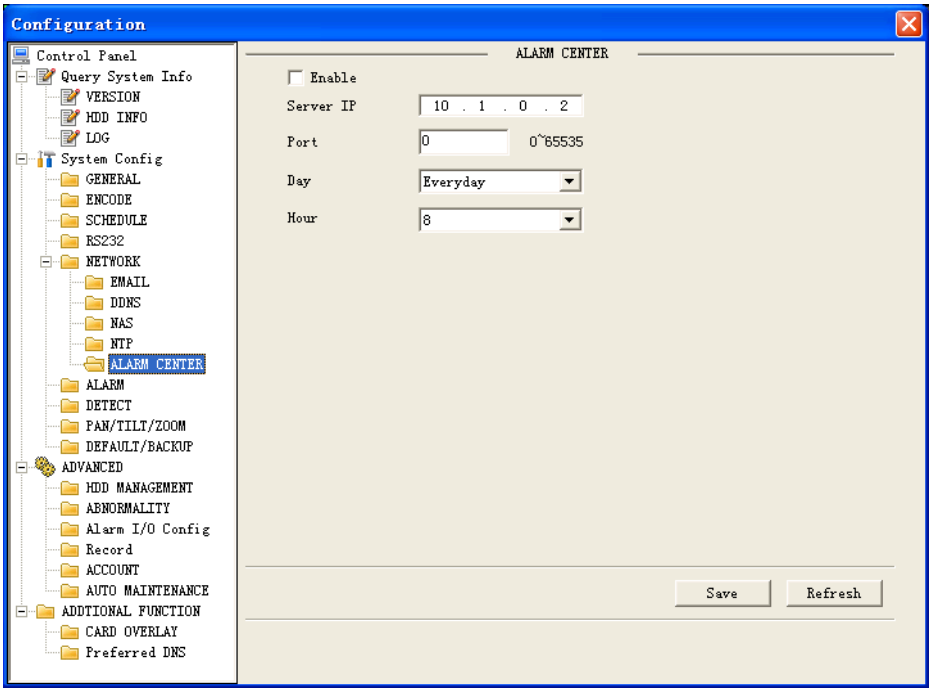


Figure 7-39

7.3.2.5 RS232

RS232 includes the following items. See Figure 7-40.

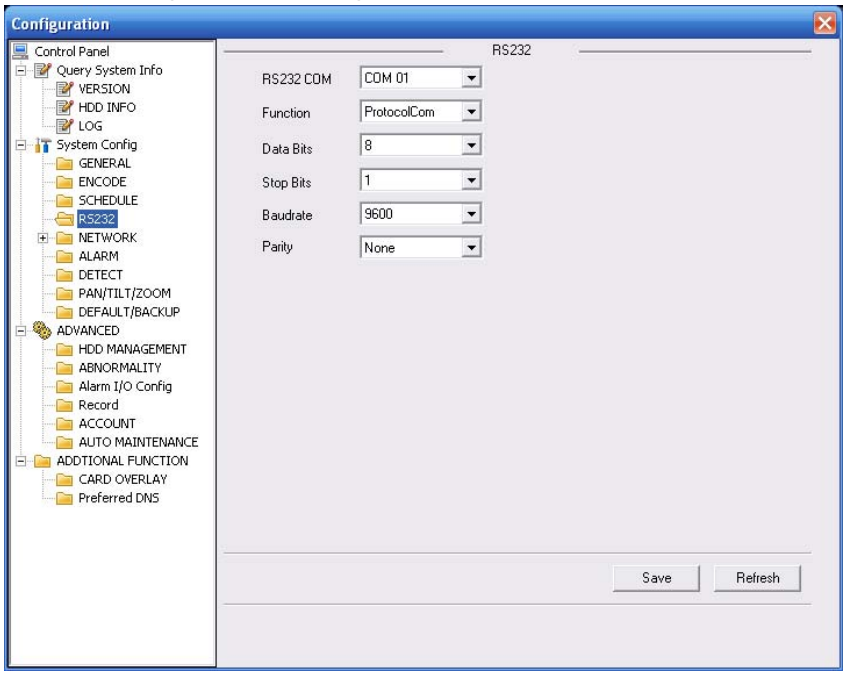


Figure 7-40

Please refer to the following sheet for detailed information.

Parameter	Function
RS232	There are various devices for you to select. COM is for you use the COM or mini-end software to upgrade or debug the program. The control keyboard is for you to control the devi via the special keyboard. Transparent COM is to connect to the PC to transfer data directly. Protocol COM is for card overlay function. Network keyboard is for you to use the special keyboard to control the device. PTZ matrix is to connect to the peripheral matrix control.
Function	Console is to upgrade the program or debug via COM or mini terminal software.
	Keyboard: COM control protocol. You can use keyboard to control DVR via COM.
Data Bit	The value ranges from 5 to 8.
Stop Bit	There are three options: 1/2.
Baud Bit	You can select corresponding baud bit here.
Parity	There are four options: none/odd/even/space/mark.

System default setup is:

- Function: Console.
- Data bit: 8
- Stop bit: 1
- Baud bit: 9600
- Parity: None.

7.3.2.6 Alarm

Please note before alarm setup, you need to properly connect alarm input and output device, send address and receive address. Click save button confirm current setup.

Alarm setup includes the following items. See Figure 7-41.

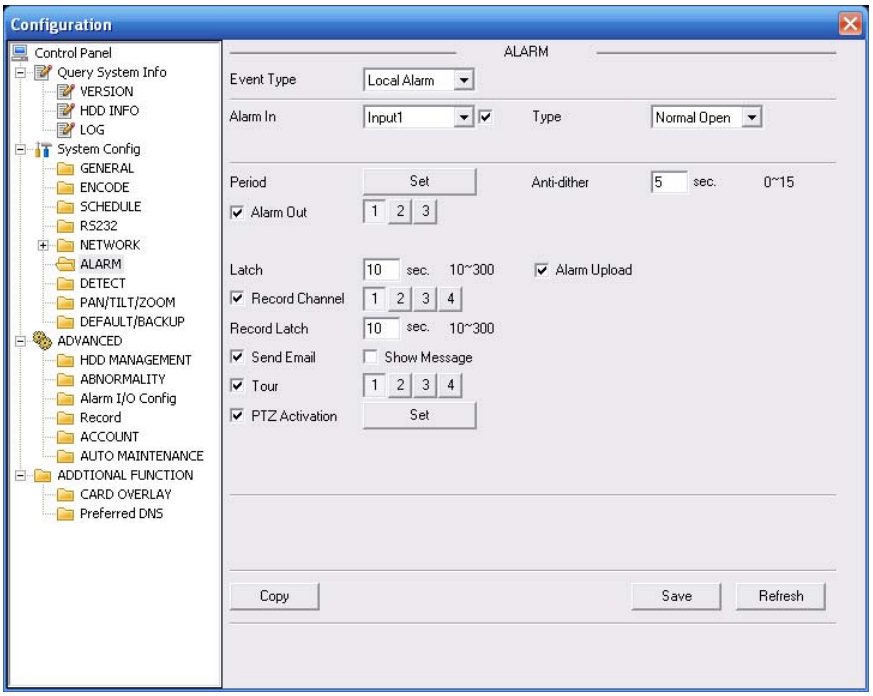


Figure 7-41

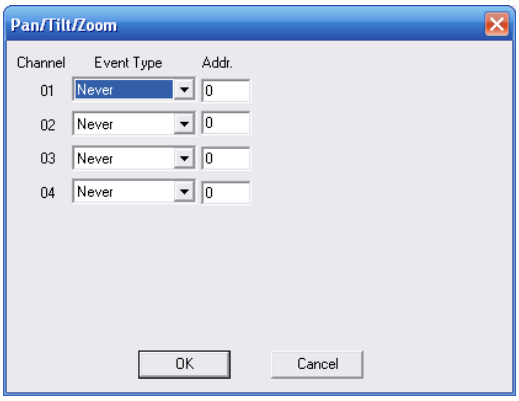


Figure 7-42

Please refer to the following sheet for detailed information.

Parameter	Function
Event Type	It includes local alarm/network alarm/HDD alarm. Local alarm: Device detects alarm from input port. Network: Device detects alarm from network. The HDD alarm means there is alarm when there is no HDD, no space, HDD error and etc.
Alarm in	Select corresponding alarm channel.
Enable	You need to draw a circle here so that system can detect the alarm signal.
Type	There are two options: normal open and normal close. NO becomes activated in low voltage, NC becomes activated in high voltage.
Period	Alarm record function becomes activated in the specified periods. There are six periods in one day. Please draw a circle to enable corresponding period. Select date. If you do not select, current setup applies to today only. You can select all week column to apply to the whole week. Click OK button, system goes back to alarm setup interface, please click save button to exit.
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 0 to 15s.
Normal Out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurred.
Alarm Latch	System can delay the alarm output for specified time after alarm ended. The value ranges from 10 seconds to 300 seconds.
Record Channel	System auto activates current channel to record once alarm occurs (working with alarm activation function). Please go to Chapter 7.3.2.3 Schedule to set alarm record period and go to Chapter 7.3.3.2 Record to set the schedule record mode.
Record Latch	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Email	Please draw a circle to enable email function. System can send out email to alert you when alarm occurs and ends.
Tour	Display the selected video in local monitor window. Tour interval and tour mode are set in DVR local menu (Chapter 5.3.9 Display)
PTZ activation	Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. See Figure 7-42. The PTZ configuration events include preset, tour, and pattern.
Copy	It is a shortcut menu button. You can copy current channel setup to one or more (all) channels.

Parameter	Function
Save	You can click save button after you complete setup for one channel, or you can complete the whole setups and then click save button.
Refresh	Click this button to get device latest configuration information.

7.3.2.7 Detect

Detect interface is shown as in Figure 7-43.

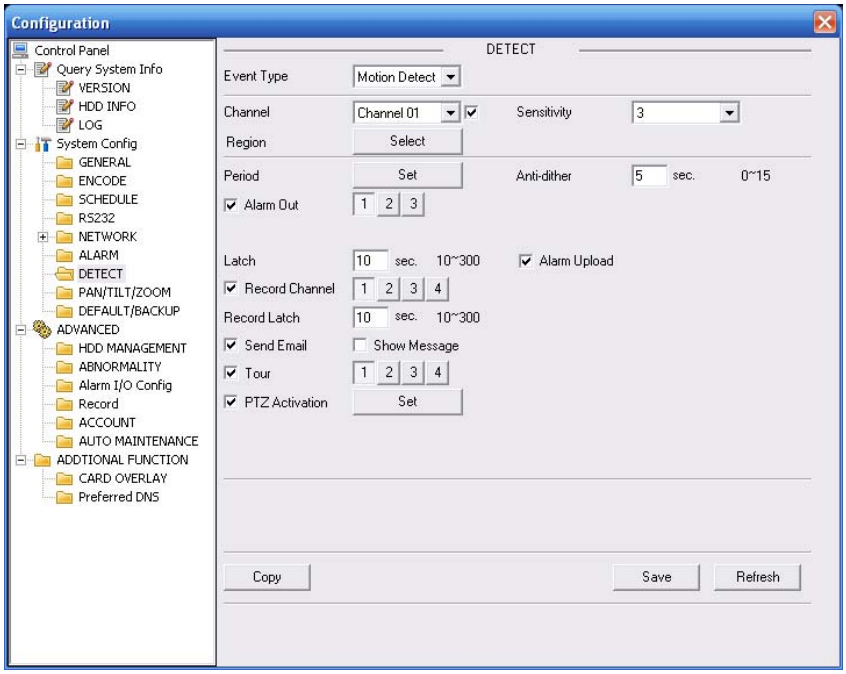


Figure 7-43

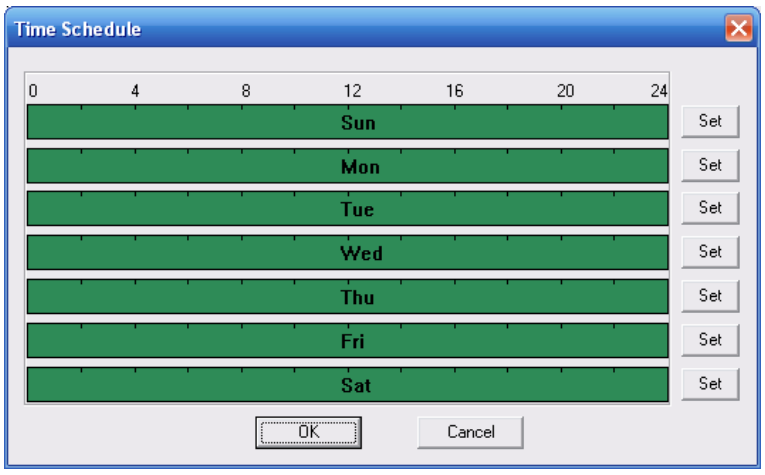


Figure 7-44

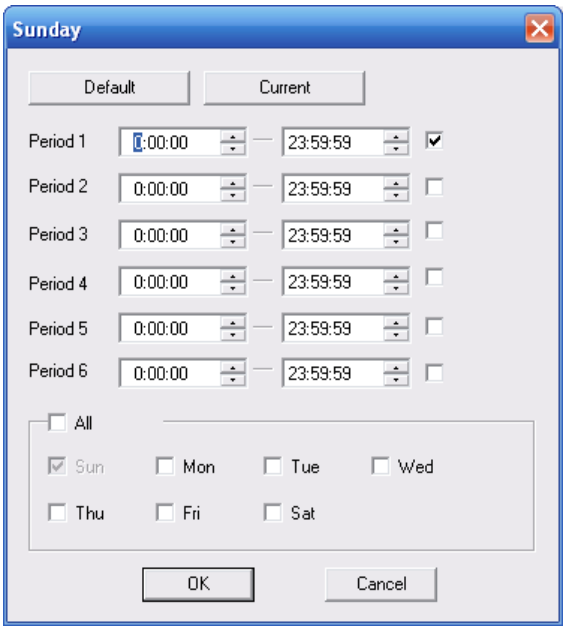


Figure 7-45

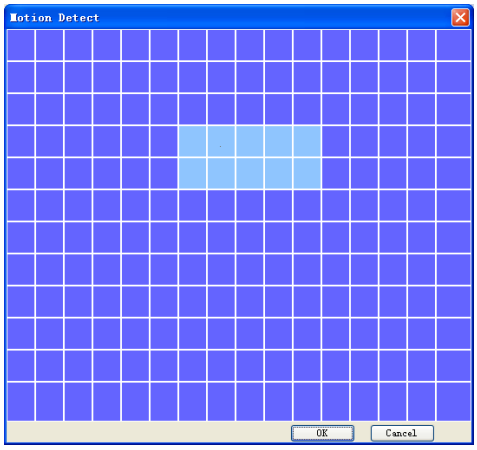


Figure 7-46

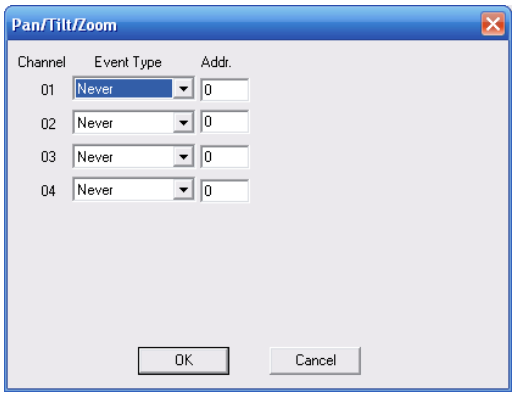


Figure 7-47

Please refer to the following sheet for detailed information.

Parameter	Function
Event Type	There are three types: Motion detection/video loss/Camera Masking.
Channel	Select channel name from the dropdown list.
Enable	You need to draw a circle to enable motion detection function.
Sensitivity	There are six levels. The sixth level has the highest sensitivity.
Region	There are six levels. The sixth level has the highest sensitivity. If you select motion detection type, you can click this button to set motion detection zone. The interface is shown as in Figure 7-46. There are PAL 22X18/NTSC 22X15 zones. Right click mouse you can go to full-screen display mode. Do remember clicking OK button in Figure 7-46 to save your motion detection zone setup.
Period	Motion detection function becomes activated in the specified periods. There are six periods in one day. Please draw a circle to enable corresponding period. Here is for you to set record period. Click set button, you can see an interface is shown as in Figure 7-44. In Figure 7-44, click time set button, you can see an interface is shown as in Figure 7-45. Here you can set time period.
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 0s to 15s.
Normal out	There is 3-channel alarm output. Corresponding to motion detection alarm output port(multiple choices) Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm latch	System can delay the alarm output for specified time after alarm end The value ranges from 10s to 300s.
Record channel	System auto activates motion detection channel (multiple choices) to record once alarm occurs (working with motion detection function). Please note you need to go to Chapter 7.3.2.3 Schedule to set motion detection record period and go to Chapter 7.3.3.2 Record to set current period as auto record.
Record latch	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends.
Tour	Display the selected video in local monitor window. Tour interval and tour mode are set in DVR local menu (Chapter 5.3.9 Display)
PTZ Activation	Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm.
Copy	It is a shortcut menu button. You can copy current channel setup to one or more (all) channels.
Save	You can click save button after you complete setup for one channel, or you can complete the whole setups and then click save button.

Parameter	Function
Refresh	Click this button to get device latest configuration information.

7.3.2.8 Pan/Tilt/Zoom

Pan/Tilt/Zoom interface is shown as in Figure 7-48.

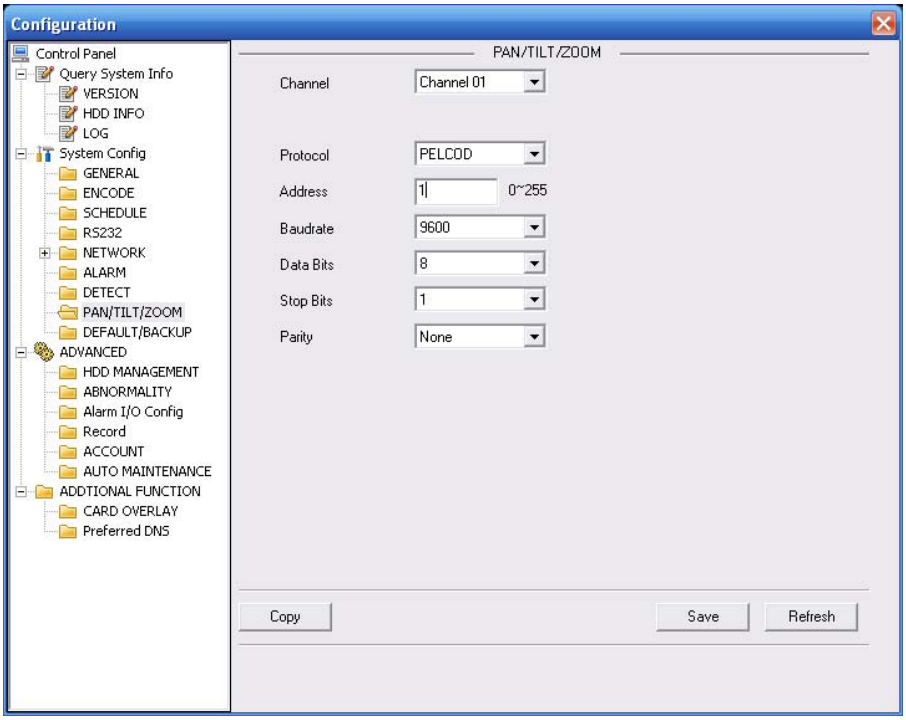


Figure 7-48

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	You can select monitor channel from the dropdown list. .
Protocol	Select the corresponding dome protocol.(such as PELCOD)
Address	Set corresponding dome address. Default value is 1. Please note your setup here shall comply with your dome address; otherwise you can not control the speed dome.
Baud Rate	Select the dome baud rate. Default setup is 9600.
Data Bit	Default setup is 8. Please set according to the speed dome dial switch setup.
Stop bit	Default setup is 1. Please set according to the speed dome dial switch setup.
Parity	Default setup is none. Please set according to the speed dome dial switch setup.
Save	You can click save button after you complete setup for one channel, or you can complete the whole setups and then click save button.
Refresh	Click this button to get device latest configuration information.

7.3.2.9 Default/Backup

Here you can export or import configuration information. See Figure 7-49.

Export configuration: Click export config button to save current setup as a file. Extension name is CFG. See Figure 7-50.

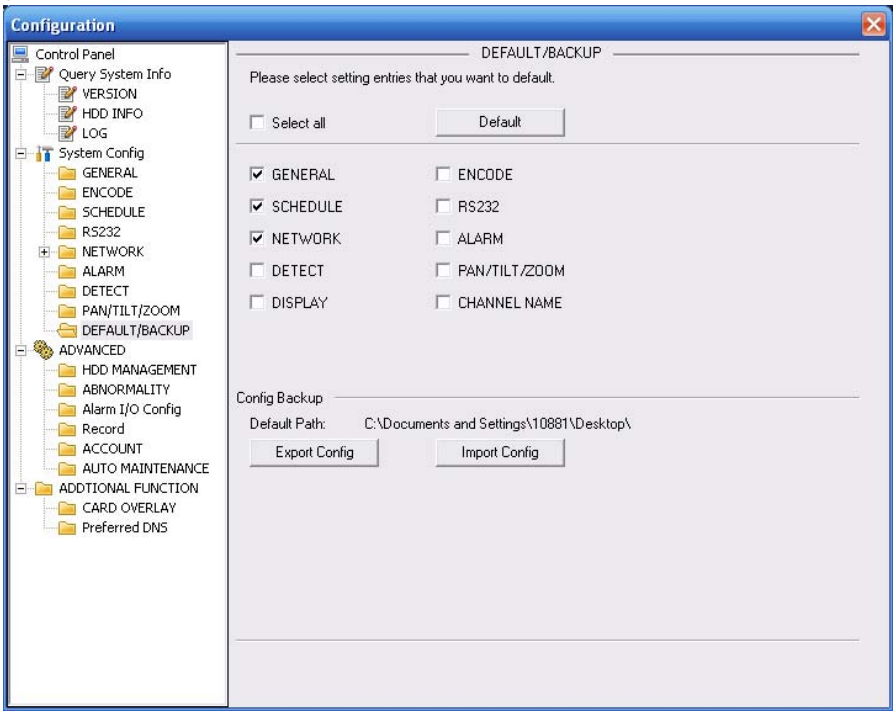


Figure 7-49

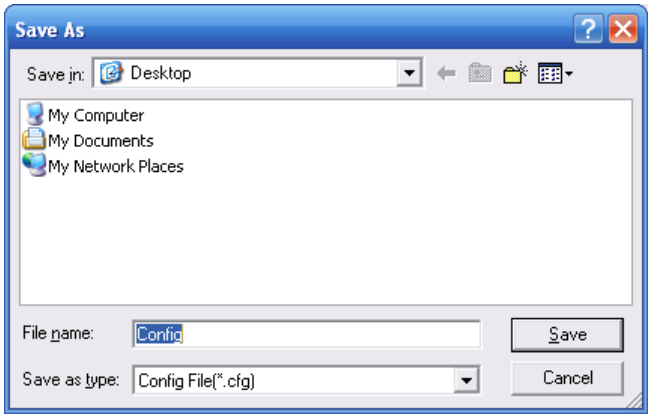


Figure 7-50

Please refer to the following sheet for detailed information.

Parameter	Function
Select All	Restore factory default setup.
Export Configuration	Export system configuration to local PC.
Import Configuration	Import configuration from PC to the system.

7.3.3 Advanced

Advanced includes the following items. See Figure 7-51.

- Abnormity

- HDD management
- Alarm I/O configuration
- Record
- Auto maintenance

7.3.3.1 Account

Account interface is shown as in Figure 7-51. Here you can add/delete user, add/delete group, modify user or group right, modify user password.

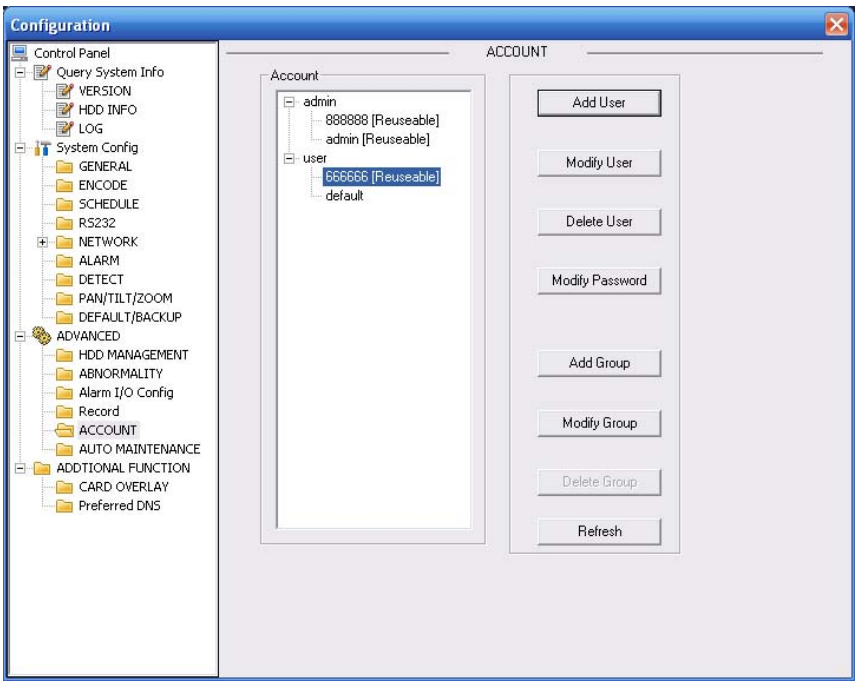


Figure 7-51

Click add group button, you can see the following interface. See Figure 7-52.
Here you can add one new group, and then select corresponding rights for the whole group accounts.

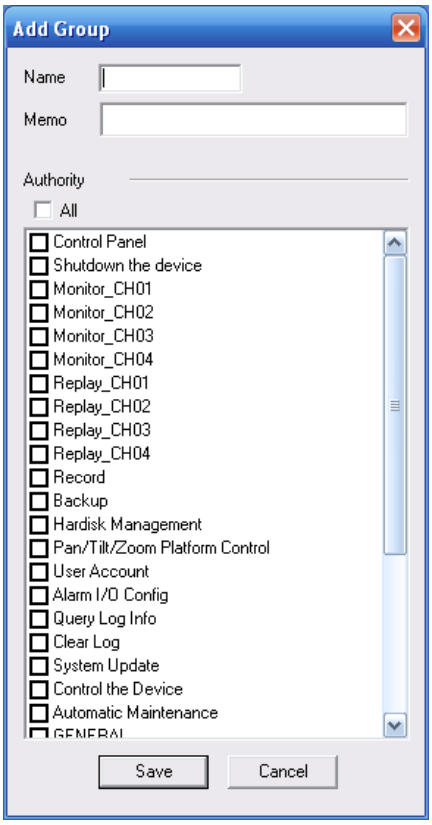


Figure 7-52

Click add user button, you can see the following interface. See Figure 7-53.
Here you can input a new user and then select corresponding rights.
Please note one user must belong to one group and user right shall not exceed group rights limit.

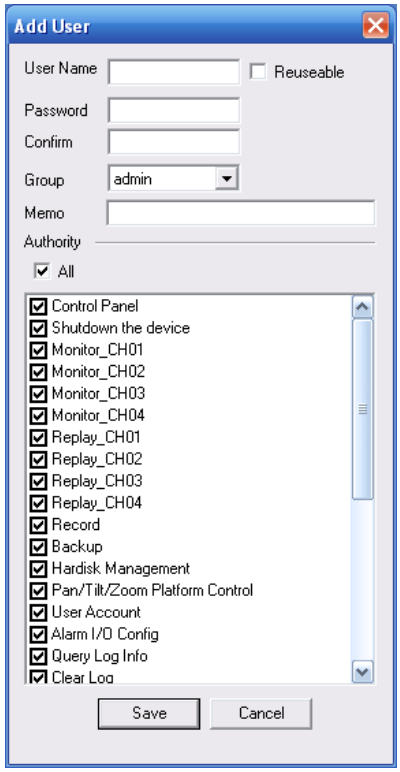


Figure 7-53

7.3.3.2 Record

Record interface is shown as in Figure 7-54.

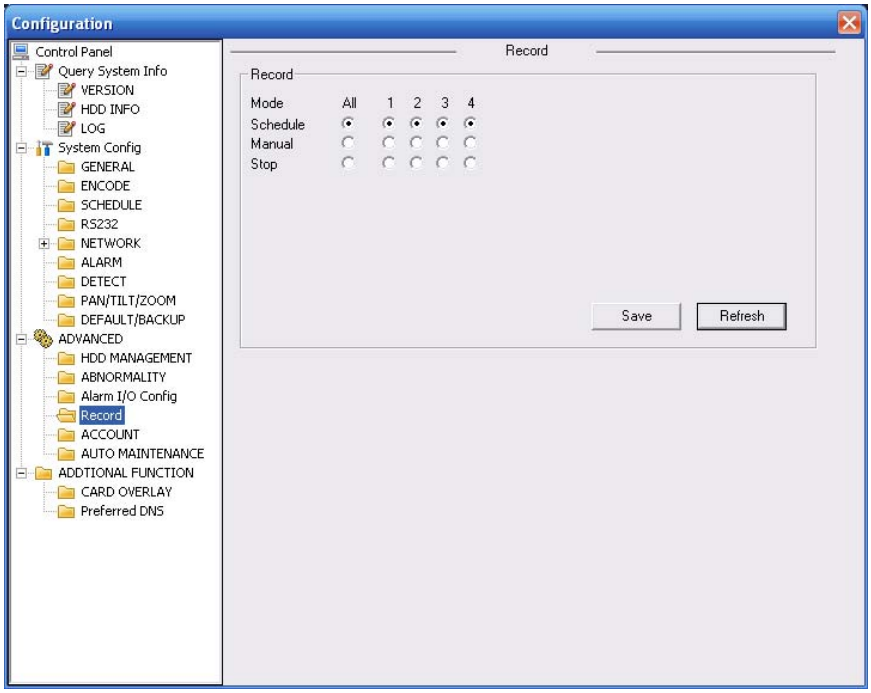


Figure 7-54

Please refer to the following sheet for detailed information.

Parameter	Function
Schedule	System enables auto record function as you set in record schedule setup.
Manual	Enable corresponding channel to record no matter what period applied in the record setup.
Stop	Stop current channel record no matter what period applied in the record setup.

Please refer to Chapter 4.2 Manual Record for detailed operation information.

7.3.3.3 HDD management

HDD management includes net storage management and local storage management.

Please select the storage device first and then you can see the items on your right become valid.

You can check the corresponding item here. See Figure 7-55.

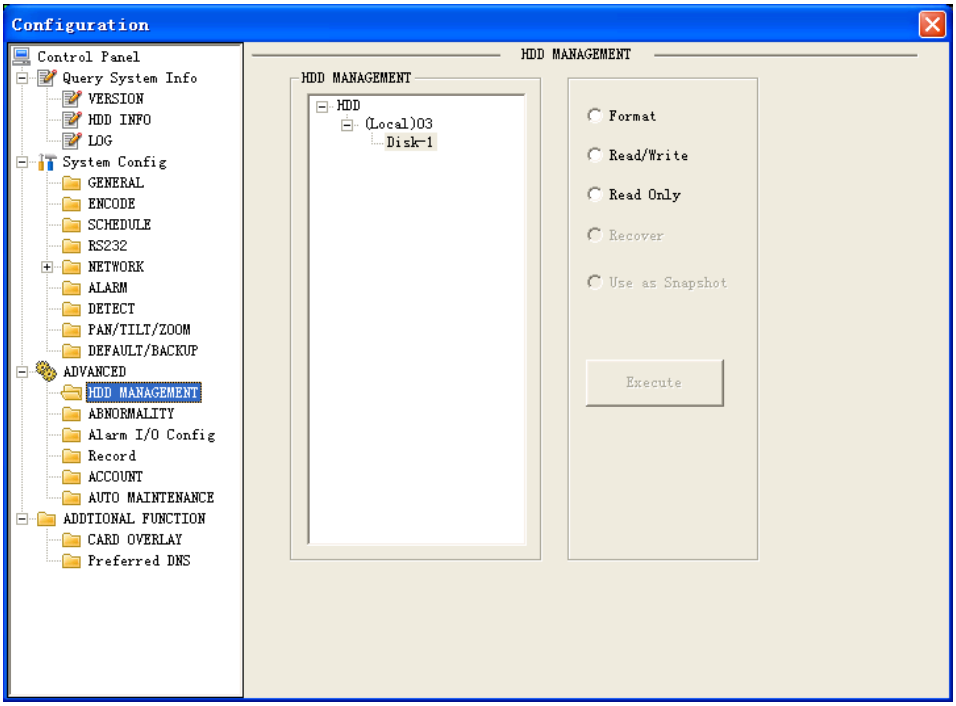


Figure 7-55

Please refer to the following sheet for detailed information.

Parameter	Function
Format	Clear data in the disk.
Read/write	Set current disk as read/write
Read only	Set current disk as read.
Redundant	Set current disk as redundant disk.
Recover	Recover dada after error occurs.
Use as snapshot	Set current disk as snapshot disk.

Important

System needs to reboot to activate current setup.

7.3.3.4 Auto maintenance

Auto maintenance interface is shown as in Figure 7-56. Here you can enable auto reboot function or auto delete file function. (Need DVR supported)

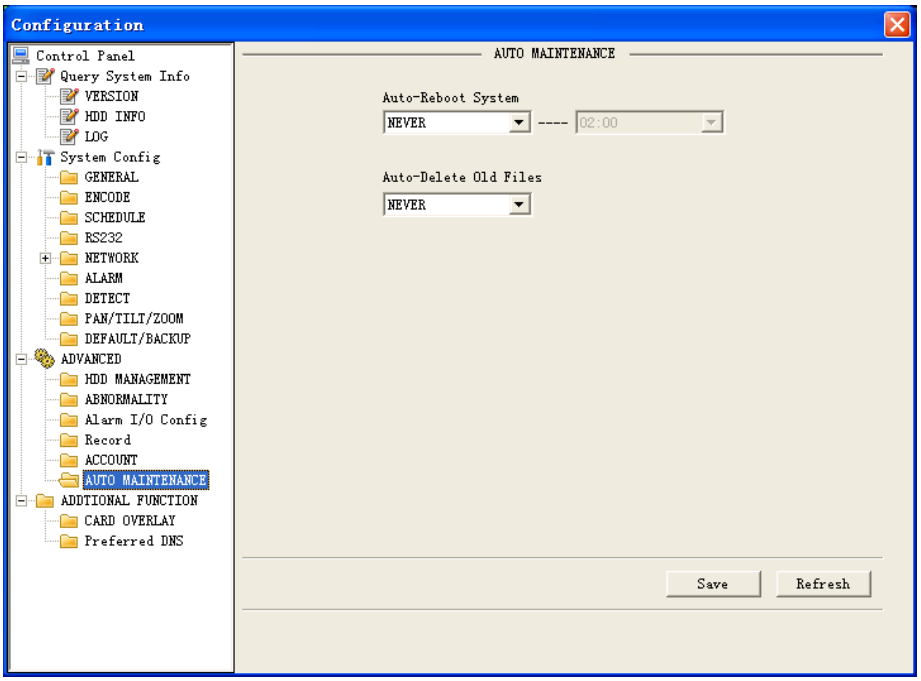


Figure 7-56

7.3.3.5 Abnormity

Abnormity interface is shown as in Figure 7-57. Please note this function needs DVR supported.

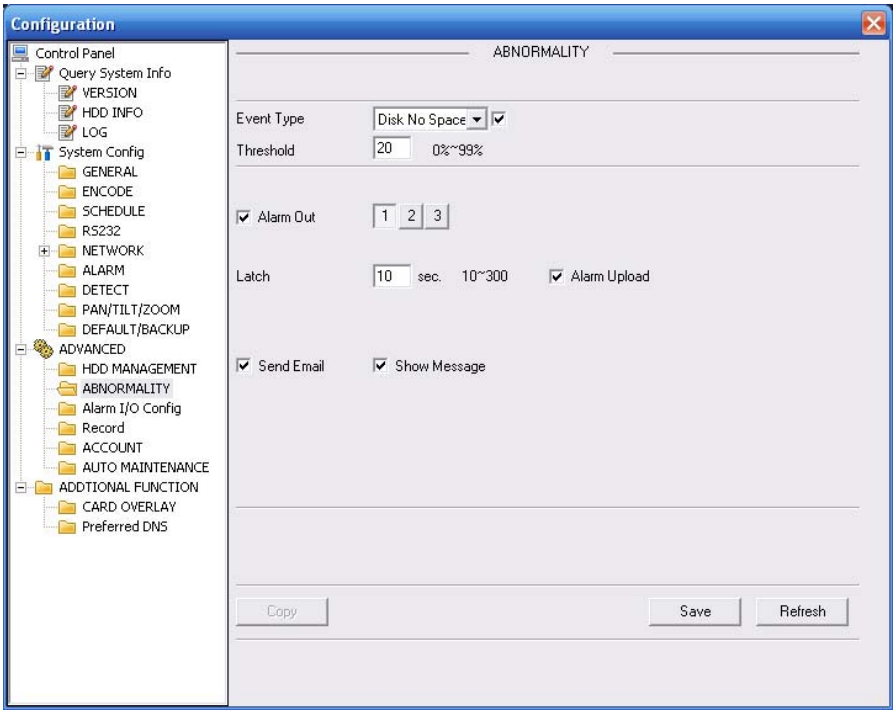


Figure 7-57

Please refer to the following sheet for detailed information.

Parameter	Function
Event Type	The abnormal events include: no disk, no space, disk error, net error. You need to draw a circle to enable this function.

Parameter	Function
Threshold	You can set the minimum percentage value here. The device can alarm when capacity is not sufficient.
Alarm Out	The corresponding alarm activation output channel when alarm occurs.
Latch	The alarm output can delay for the specified time after alarm stops. Then system disables alarm and corresponding activation output. The value ranges from 10s to 300s.
Alarm upload	System can upload the alarm signal to the centre (Including alarm centre.)
Send email	If you enable this function, system can send out email to alarm the specified user.
Show message	System can display alarm information in local DVR screen.

7.3.3.6 Alarm I/O Configuration

Alarm I/O configuration is shown as in Figure 7-58.

Important

The alarm output port should not be connected to high power load directly (It shall be less than 1A) to avoid high current which may result in relay damage. Please use the co contactor to realize the connection between the alarm output port and the load.

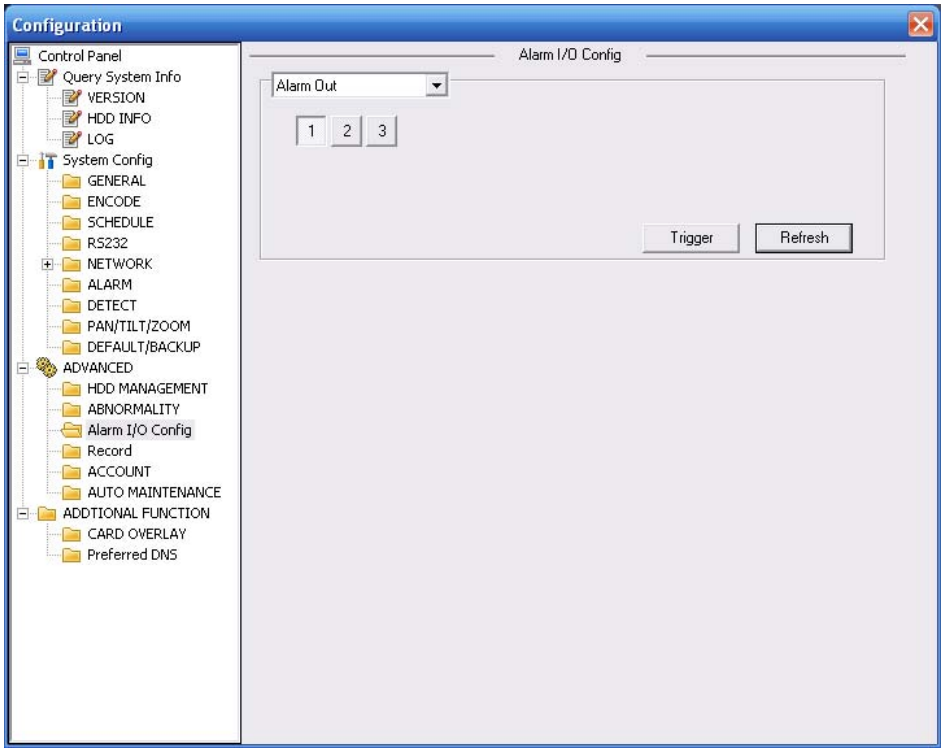


Figure 7-58

Please refer to the following sheet for detailed information.

Parameter	Function
Alarm output	There are three output channels (Multiple choices).

Activate	Enable/disable alarm output device. After the Web activated the alarm, you need to cancel the channel and then click the activation button to cancel the alarm, or you need to cancel the alarm in the pop-up dialogue box in local-end.
Refresh	Search alarm output status.

7.3.4 Additional Function

7.3.4.1 Card Overlay

The card overlay function is for financial areas. It includes Sniffer, information analysis and title overlay function. The Sniffer mode includes COM and network.

The COM interface is shown as in Figure 7-59.

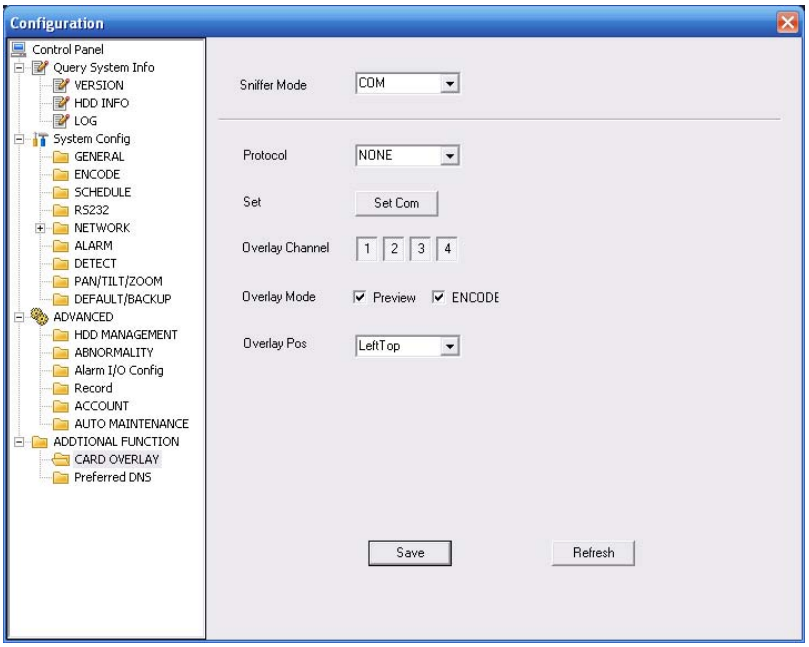


Figure 7-59

Figure 7-60

Please refer to the following sheet for detailed information.

Parameter	Function
Sniffer mode	It includes two options: COM/Net.
Protocol	Please select from the dropdown list.
Setting	Click COM setting button, the interface is shown as in Figure 7-60. You can set the corresponding parameter here.
Overlay channel	Please select the channel you want to overlay the card number.
Overlay mode	There are two options: preview and encode. Preview means overlay the card number in the local monitor video. Encode means overlay the card number in the record file.
Overlay position	Here you can select the proper overlay position from the dropdown list.

The net sniffer mode interface is shown as below. See Figure 7-61.

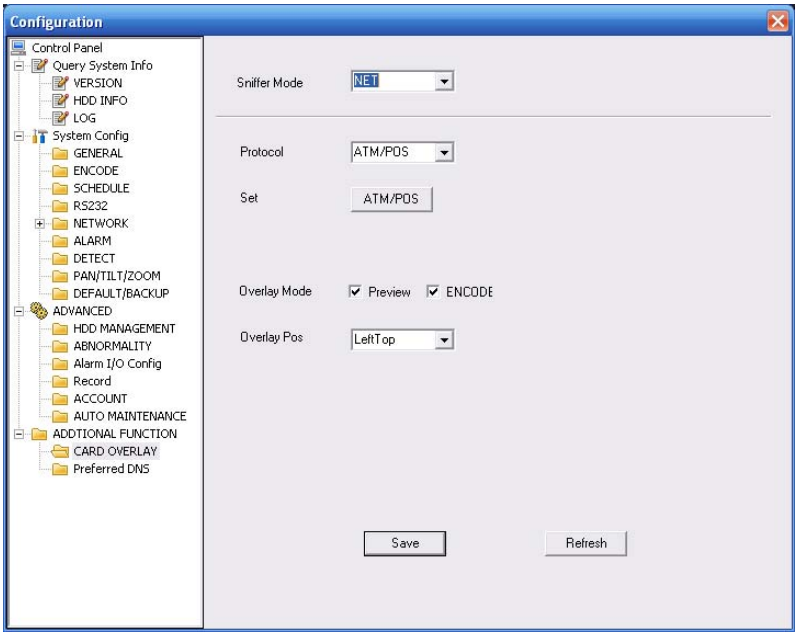


Figure 7-61

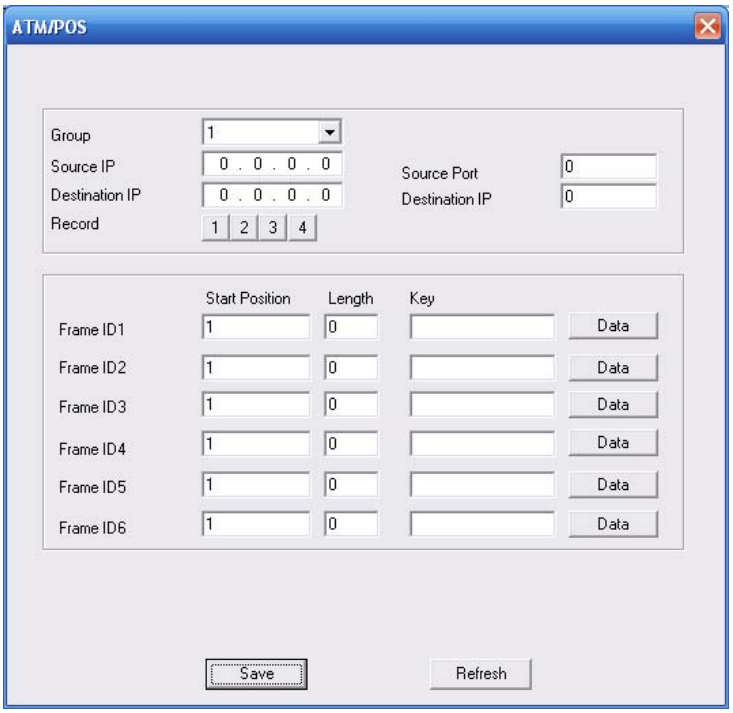


Figure 7-62

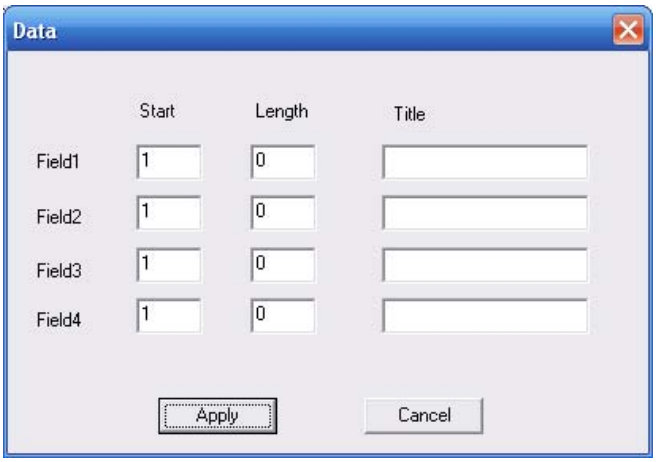


Figure 7-63

Please refer to the following sheet for detailed information.

Parameter	Function
Sniffer mode	It includes two options: COM/Net.
Protocol	Please select from the dropdown list. The above interface is based on ATM/POS protocol.

Parameter	Function
Setting	Click ATM/POS setting button, the interface is shown as in Figure 7-62. Source IP refers to host IP address that sends out information (usually it is ATM host.) Destination IP refers to other systems that receive information. Usually you do not need to set source port and target port. There are total four groups IP. The record channel applies to one group (optional) only. Six frame ID groups verification can guarantee information validity and legal. In Figure 7-62, click Data button, the interface is shown as in Figure 7-63. Here you can set some items such as offset, length, title. These parameters shall be set according to your communication protocol and sniffer content.
Overlay mode	There are two options: preview and encode. Preview means overlay the card number in the local monitor video. Encode means overlay the card number in the record file.
Overlay position	Here you can select the proper overlay position from the dropdown list.

7.3.4.2 Preferred DNS

Here you can set server or local operator DNS address. See Figure 7-64.

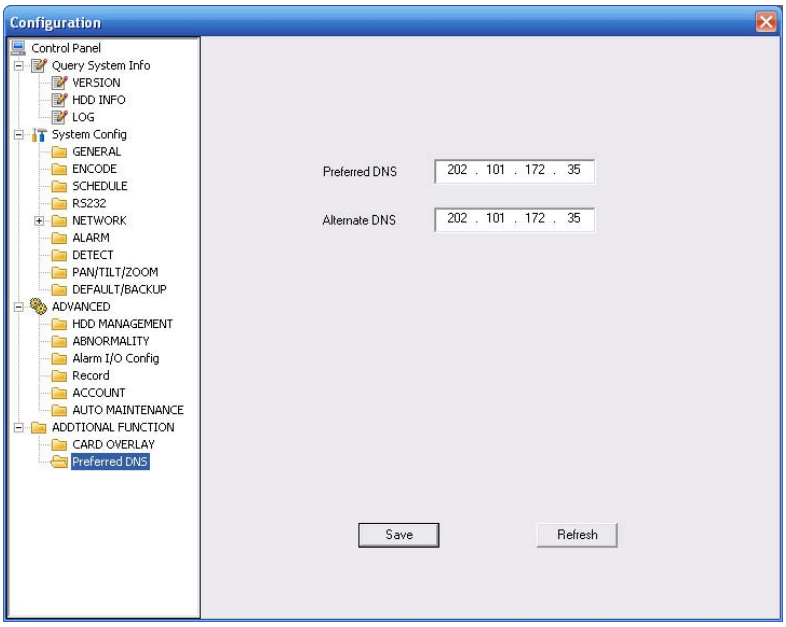


Figure 7-64

7.4 Search

Here you can select video type, channel number and time to search the file you want.

Click search button, the interface is shown as below. See Figure 7-65

Please use page up/down key to view the search results.

Double click file name, you can view the file and system will automatically backup the image in you installation directory.

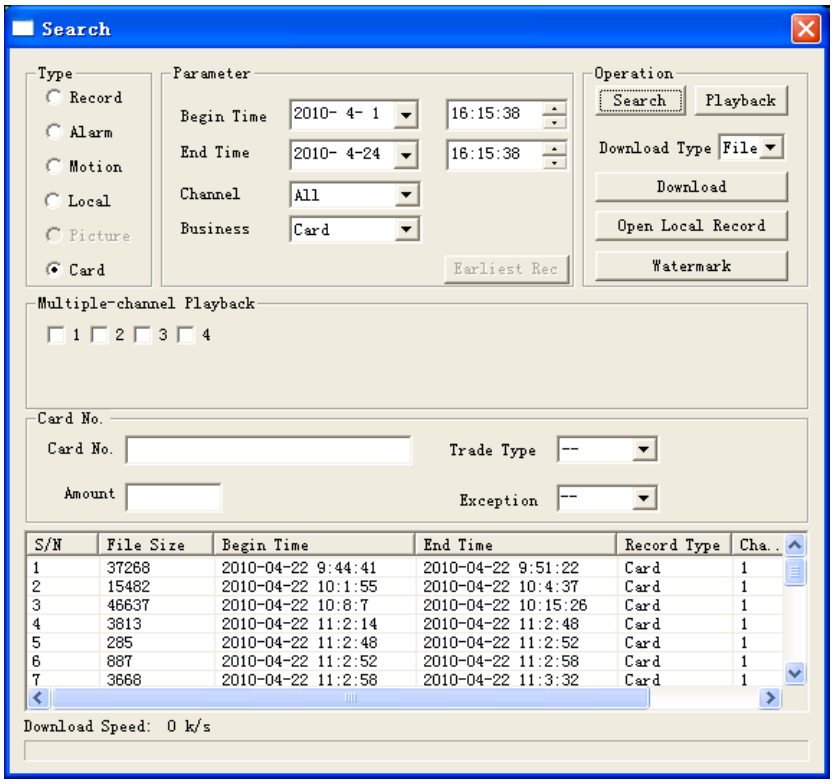


Figure 7-65

Please refer to the following sheet for detailed information.

Type	Parameter	Function
Type	Record	Search general record, alarm record and motion detection record.
	Alarm	Search alarm record.
	Motion Detection	Search motion detection record.
	Local	Search local record.
	Picture	Search snapshot file. This function is not available in current device.
	Card	Search card record.
Item	Begin time	Set the file start time. You can select from the dropdown list.
	End time	Set the file end time. You can select from the dropdown list
	Channel	Select the channel from the dropdown list.
Operation	Search	Click this button you can view the recorded file matched your requirements. There are 100 files in one screen. You can use pg up/down button to view more files.
	Playback	Select the file first and then click playback button to view the video.
	Download type	Download by file: Select the file(s) and then click download button. Download by time: Download the recorded file(s) within you specified period.

Type	Parameter	Function
	Download	Select the file you need (multiple choices) and then click download button, you can see system pops up a dialogue box. See Figure 7-70. Input the downloaded file name, specify the path and then click OK button. You can see system begins download and the download becomes stop button. There is a progress bar for your reference. Please refer to Chapter 7.4.2.Download.
	Open local record	Select local record to play.
	Watermark	The device support watermark function to verify video. Please refer to Chapter 7.4.3.Watermark.
Multiple-channel playback		System supports playback one file in several monitor channels.

7.4.1 Playback

In the search result interface, you can select one or more files to download to your local PC. The playback bar is shown as below. See Figure 7-66.

1: Play

2: Pause

3: Stop

4: Slow play

5: Fast play

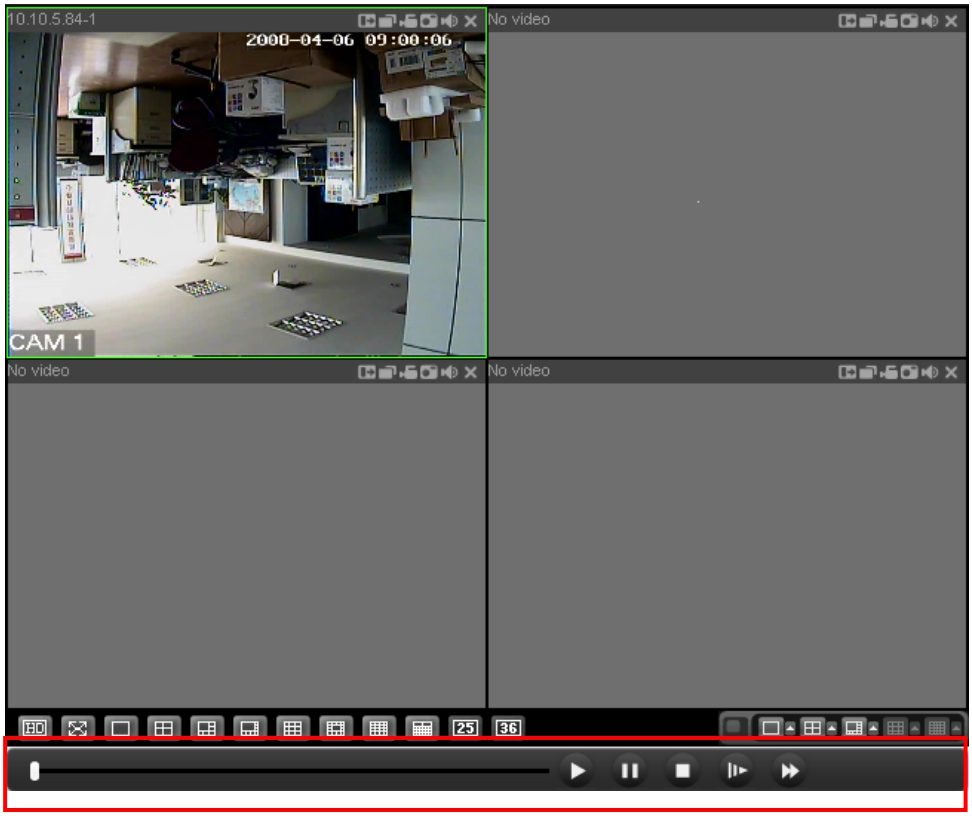


Figure 7-66

7.4.2 Download

You can select one or more files you want to download and then click down load button. System pops up a dialogue box asking you specify directory. See Figure 7-67.

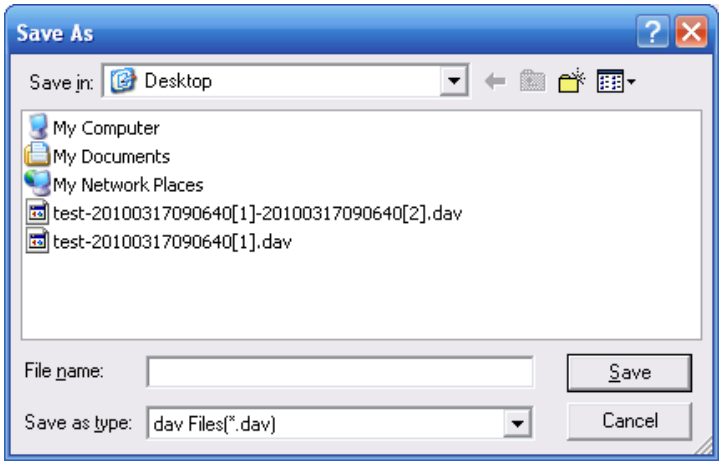


Figure 7-67

Then you can input file name and click save to backup file in your local pc.
During the download process, there is a process bar for you reference and you can see download button becomes stop button. See Figure 7-68.

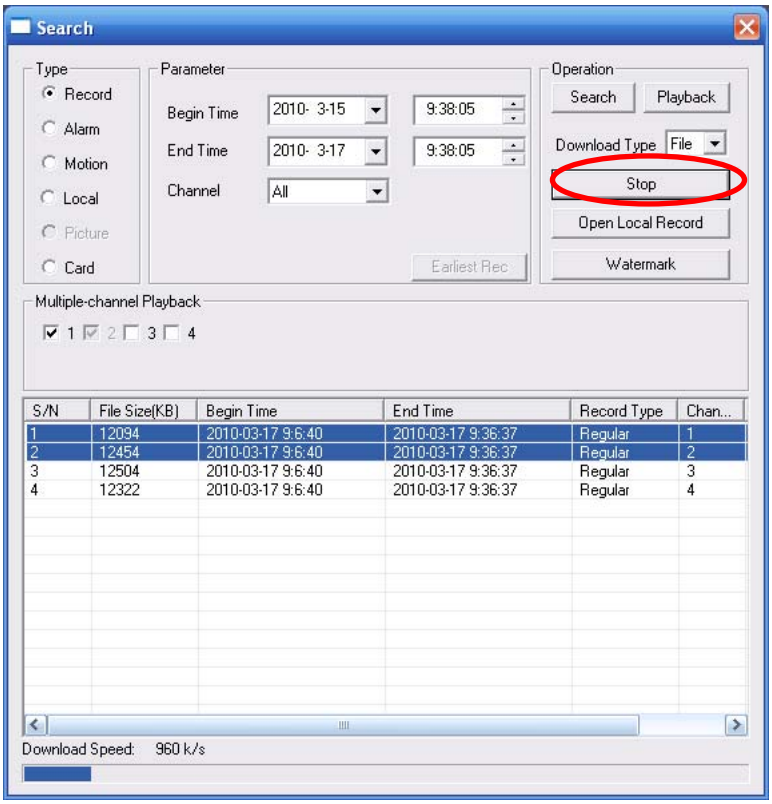


Figure 7-68

7.4.3 Watermark

Click watermark button, the interface is shown as below. See Figure 7-69.
Please click the local file button to select the file first. (The file shall contain the watermark information). Click verify button, system displays the watermark information such as 7533 in the following column. During the playback process, you can view the watermark modification information such as time and position.
If the playback file is original, there is no corresponding information.
Right now, system supports two modification types:

- Some recorded video has been modified
- The some section of the recorded video is missing

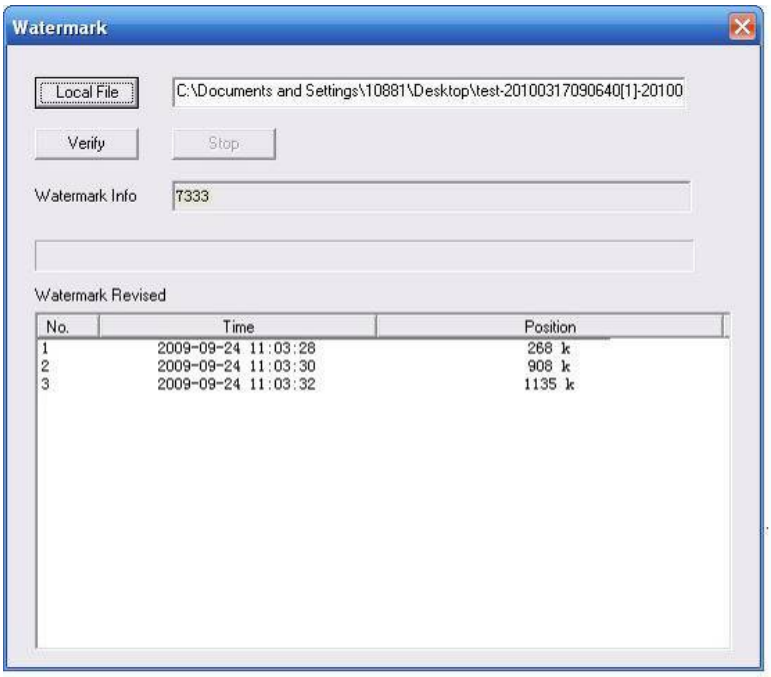


Figure 7-69

7.5 Alarm

Here you can set alarm type and alarm prompt audio file. See Figure 7-70.

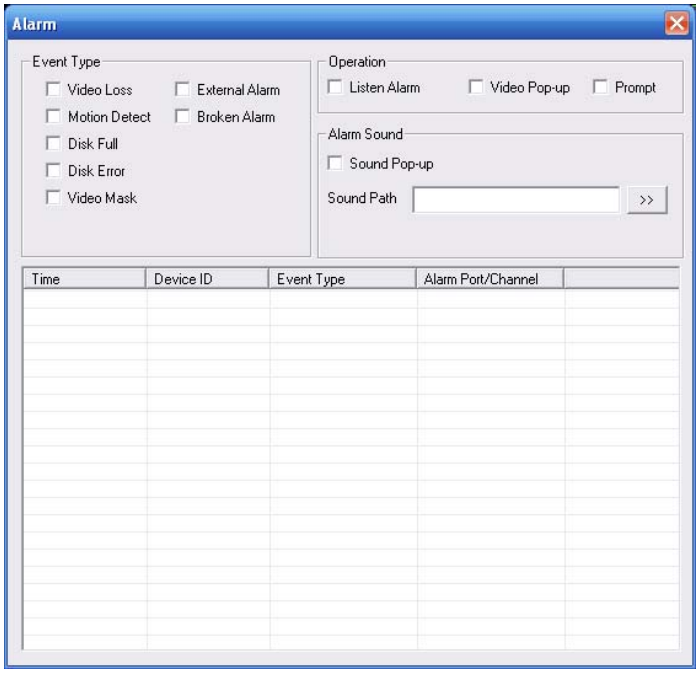


Figure 7-70

7.6 About

Click about button, you can view current web client information. See Figure 7-71.

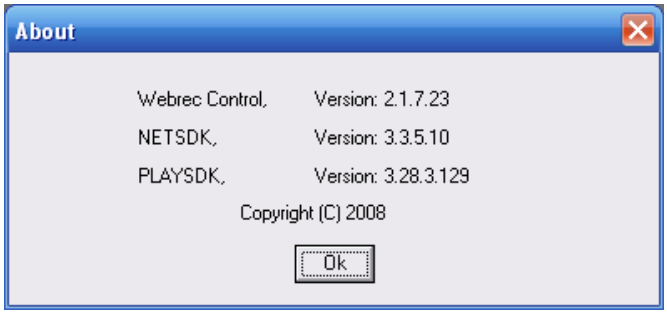


Figure 7-71

7.7 Log out

Click log out button, system goes back to log in interface. See Figure 7-72.

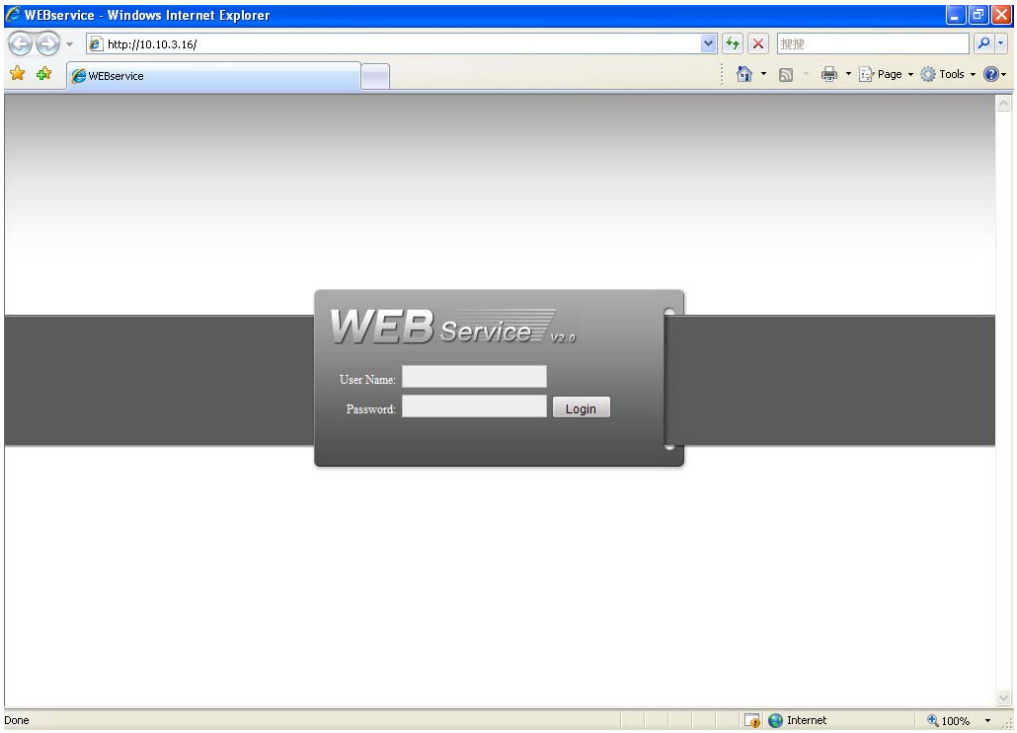


Figure 7-72

7.8 Un-install Web Control

You can use web un-install tool “uninstall web.bat” to un-install web control.

Please note, before you un-installation, please close all web pages, otherwise the un-installation might result in error.

8 Enterprise Professional Surveillance System

Besides Web, you can use our Professional Surveillance Software (PSS) to login the device. For detailed information, please refer to *PSS user's manual.*

9 FAQ

1. DVR can not boot up properly.

There are following possibilities:

- Input power is not correct.
- Power connection is not correct.
- Power switch button is damaged.
- Program upgrade is wrong.
- HDD malfunction or something wrong with HDD ribbon.
- Seagate DB35.1，DB35.2，SV35 or Maxtor 17-g has compatibility problem. Please upgrade to the latest version to solve this problem.
- Front panel error.
- Main board is damaged.

2. DVR often automatically shuts down or stop running.

There are following possibilities:

- Input voltage is not stable or it is too low.
- HDD malfunction or something wrong wit the ribbon.
- Button power is not enough.
- Front video signal is not stable.
- Working environment is too harsh, too much dust.
- Hardware malfunction.

3. System can not detect hard disk.

There are following possibilities:

- HDD is broken.
- HDD ribbon is damaged.
- HDD cable connection is loose.

4. There is no video output whether it is one-channel, multiple-channel or all-channel output.

There are following possibilities:

- Program is not compatible. Please upgrade to the latest version.
- Brightness is 0. Please restore factory default setup.
- There is no video input signal or it is too weak.
- Check privacy mask setup or your screen saver.
- DVR hardware malfunctions.

5. Real-time video color is distorted.

There are following possibilities:

- When using BNC output, NTSC and PAL setup is not correct. The real-time video becomes black and white.
- DVR and monitor resistance is not compatible.
- Video transmission is too long or degrading is too huge.

- DVR color or brightness setup is not correct.

6. Can not search local records.

There are following possibilities:

- HDD ribbon is damaged.
- HDD is broken.
- Upgraded program is not compatible.
- The recorded file has been overwritten.
- Record function has been disabled.

7. Video is distorted when searching local records.

There are following possibilities:

- Video quality setup is too low.
- Program read error, bit data is too small. There is mosaic in the full screen. Please restart the DVR to solve this problem.
- HDD data ribbon error.
- HDD malfunction.
- DVR hardware malfunctions.

8. There is no audio when monitor.

There are following possibilities:

- It is not a power picker.
- It is not a power acoustics.
- Audio cable is damaged.
- DVR hardware malfunctions.

9. There is audio when monitor but there is no audio when system playback.

There are following possibilities:

- Setup is not correct. Please enable audio function
- Corresponding channel has no video input. Playback is not continuous when the screen is blue.

10. Time display is not correct.

There are following possibilities:

- Setup is not correct
- Battery contact is not correct or voltage is too low.
- Crystal is not broken.

11. DVR can not control PTZ.

There are following possibilities:

- Front panel PTZ error
- PTZ decoder setup, connection or installation is not correct.
- Cable connection is not correct.
- PTZ setup is not correct.
- PTZ decoder and DVR protocol is not compatible.

- PTZ decoder and DVR address is not compatible.
- When there are several decoders, please add 120 Ohm between the PTZ decoder A/B cables furthest end to delete the reverberation or impedance matching. Otherwise the PTZ control is not stable.
- The distance is too far.

12. Motion detection function does not work.

There are following possibilities:

- Period setup is not correct.
- Motion detection zone setup is not correct.
- Sensitivity is too low.
- For some versions, there is hardware limit.

13. Can not log in client-end or web.

There are following possibilities:

- For Windows 98 or Windows ME user, please update your system to Windows 2000 sp4. Or you can install client-end software of lower version. Please note right now, our DVR is not compatible with Windows VISTA control.
- ActiveX control has been disabled.
- No dx8.1 or higher. Please upgrade display card driver.
- Network connection error.
- Network setup error.
- Password or user name is invalid.
- Client-end is not compatible with DVR program.

14. There is only mosaic no video when preview or playback video file remotely.

There are following possibilities:

- Network fluency is not good.
- Client-end resources are limit.
- There is multiple-cast group setup in DVR. This mode can result in mosaic. Usually we do not recommend this mode.
- There is privacy mask or channel protection setup.
- Current user has no right to monitor.
- DVR local video output quality is not good.

15. Network connection is not stable.

There are following possibilities:

- Network is not stable.
- IP address conflict.
- MAC address conflict.
- PC or DVR network card is not good.

16. Burn error /USB back error.

There are following possibilities:

- Burner and DVR are in the same data cable.

- System uses too much CPU resources. Please stop record first and then begin backup.
- Data amount exceeds backup device capacity. It may result in burner error.
- Backup device is not compatible.
- Backup device is damaged.

17. Keyboard can not control DVR.

There are following possibilities:

- DVR serial port setup is not correct
- Address is not correct
- When there are several switchers, power supply is not enough.
- Transmission distance is too far.

18. Alarm signal can not been disarmed.

There are following possibilities:

- Alarm setup is not correct.
- Alarm output has been open manually.
- Input device error or connection is not correct.
- Some program versions may have this problem. Please upgrade your system.

19. Alarm function is null.

There are following possibilities:

- Alarm setup is not correct.
- Alarm cable connection is not correct.
- Alarm input signal is not correct.
- There are two loops connect to one alarm device.

20. Remote control does not work.

There are following possibilities:

- Remote control address is not correct.
- Distance is too far or control angle is too small.
- Remote control battery power is low.
- Remote control is damaged or DVR front panel is damaged.

21. Record storage period is not enough.

There are following possibilities:

- Camera quality is too low. Lens is dirty. Camera is installed against the light. Camera aperture setup is not correct.
- HDD capacity is not enough.
- HDD is damaged.

22. Can not playback the downloaded file.

There are following possibilities:

- There is no media player.
- No DXB8.1 or higher graphic acceleration software.

- There is no DivX503Bundle.exe control when you play the file transformed to AVI via media player.
- No DivX503Bundle.exe or ffdshow-2004 1012 .exe in Windows XP OS.

23. Forgot local menu operation password or network password

Please contact your local service engineer or our sales person for help. We can guide you to solve this problem.

Daily Maintenance

- Please use the brush to clean the board, socket connector and the chassis regularly.
- The device shall be soundly earthed in case there is audio/video disturbance. Keep the device away from the static voltage or induced voltage.
- Please unplug the power cable before you remove the audio/video signal cable, RS232 or RS485 cable.
- Do not connect the TV to the local video output port (VOUT).It may result in video output circuit.
- Always shut down the device properly. Please use the shutdown function in the menu, or you can press the power button in the front pane for at least three seconds to shut down the device. Otherwise it may result in HDD malfunction.
- Please make sure the device is away from the direct sunlight or other heating sources. Please keep the sound ventilation.
- Please check and maintain the device regularly.

Appendix A HDD Capacity Calculation

Calculate total capacity needed by each DVR according to video recording (video recording type and video file storage time).

Step 1: According to Formula (1) to calculate storage capacity q_i that is the capacity of each channel needed for each hour, unit Mbyte.

$$q_i = d_i \div 8 \times 3600 \div 1024 \quad (1)$$

In the formula: d_i means the bit rate, unit Kbit/s

Step 2: After video time requirement is confirmed, according to Formula (2) to calculate the storage capacity m_i, which is storage of each channel needed unit Mbyte.

$$m_i = q_i \times h_i \times D_i \quad (2)$$

In the formula:

h_i means the recording time for each day (hour)

D_i means number of days for which the video shall be kept

Step 3: According to Formula (3) to calculate total capacity (accumulation) q_T that is needed for all channels in the DVR during **scheduled video recording**.

$$q_T = \sum_{i=1}^{c} m_i \quad (3)$$

In the formula: c means total number of channels in one DVR

Step 4: According to Formula (4) to calculate total capacity (accumulation) q_T that is needed for all channels in DVR during **alarm video recording (including motion detection)**.

$$q_T = \sum_{i=1}^{c} m_i \times a\% \quad (4)$$

In the formula：$a\%$ means alarm occurrence rate

Appendix B Compatible USB Drive List

NOTE: Please upgrade the combo DVR firmware to latest version to ensure the accuracy of the table below. If you use the USB drive, please confirm the format FAT or FAT32.

Manufacturer	Model	Capacity
Sandisk	Cruzer Micro	512M
Sandisk	Cruzer Micro	1G
Sandisk	Cruzer Micro	2G
Sandisk	Cruzer Freedom	256M
Sandisk	Cruzer Freedom	512M
Sandisk	Cruzer Freedom	1G
Sandisk	Cruzer Freedom	2G
Kingston	DataTraveler II	1G
Kingston	DataTraveler II	2G
Kingston	DataTraveler	1G
Kingston	DataTraveler	2G
Maxell	USB Flash Stick	128M
Maxell	USB Flash Stick	256M
Maxell	USB Flash Stick	512M
Maxell	USB Flash Stick	1G
Maxell	USB Flash Stick	2G
Kingax	Super Stick	128M
Kingax	Super Stick	256M
Kingax	Super Stick	512M
Kingax	Super Stick	1G
Kingax	Super Stick	2G
Netac	U210	128M
Netac	U210	256M
Netac	U210	512M
Netac	U210	1G
Netac	U210	2G
Teclast	Ti Cool	128M
Teclast	Ti Cool	256M
Teclast	Ti Cool	512M
Teclast	Ti Cool	1G
Teclast	Ti Cool	2G

Appendix C Compatible CD/DVD Burner List

NOTE: Please upgrade the combo DVR firmware to latest version to ensure the accuracy of the table below. And you can use the USB cable with the model recommended to set USB burner.

Manufacturer	Model	Port Type	Type
Sony	DRX-S50U	USB	DVD-RW
Sony	DRX-S70U	USB	DVD-RW
Sony	AW-G170S	SATA	DVD-RW
Samsung	TS-H653A	SATA	DVD-RW
Panasonic	SW-9588-C	SATA	DVD-RW
Sony	DRX-S50U	USB	DVD-RW
BenQ	5232WI	USB	DVD-RW

Appendix D Compatible SATA HDD List

NOTE: Please upgrade the combo DVR firmware to latest version to ensure the accuracy of the table below. And SATA HDD should be used for the combo DVR with SATA port.

Manufacturer	Series	Model	Capacity	Port Mode
Seagate	Barracuda.10	ST3750640AS	750G	SATA
Seagate	Barracuda.10	ST3500630AS	500G	SATA
Seagate	Barracuda.10	ST3400620AS	400G	SATA
Seagate	Barracuda.10	ST3320620AS	320G	SATA
Seagate	Barracuda.10	ST3250620AS	250G	SATA
Seagate	Barracuda.10	ST3250820AS	250G	SATA
Seagate	Barracuda.10	ST3160815AS	160G	SATA
Seagate	Barracuda.10	ST380815AS	80G	SATA
Seagate	Barracuda.9	ST3160811AS2	160G	SATA
Seagate	Barracuda.9	ST3120811AS2	120G	SATA
Seagate	Barracuda.9	ST380811AS2	80	SATA
Seagate	Barracuda.9	ST380211AS2	80G	SATA
Seagate	Barracuda.11	ST3750330AS	750G	SATA
Seagate	Barracuda.11	ST3500320AS	500G	SATA
Seagate	Barracuda 7200.11	ST31500341AS	1.5T	SATA
Seagate	Pipeline HD.2	ST3320311CS	350G	SATA
Seagate	SV35.2	ST3160815SV	160G	SATA
Seagate	SV35.2	ST3250310SV	250G	SATA
Seagate	SV35.2	ST3320620SV	320G	SATA
Seagate	SV35.2	ST3500320SV	500G	SATA
Seagate	SV35.2	ST3750640SV	750G	SATA
Seagate	SV35.3	ST31000340SV	1T	SATA
Maxtor	DiamondMax 20	STM3320820AS	320G	SATA
Maxtor	DiamondMax 20	STM3250820AS	250G	SATA
Maxtor	DiamondMax 21	STM3160211AS	160G	SATA
Maxtor	DiamondMax 21	STM380211AS	80G	SATA
Maxtor	DiamondMax 21	STM340211AS	40G	SATA
Western Digital	Cariar SE	WD3200JD	320G	SATA
Western Digital	Cariar SE	WD3000JD	300G	SATA
Western Digital	Cariar SE	WD2500JS	250G	SATA
Western Digital	Cariar SE	WD2000JD	200G	SATA
Western Digital	Cariar SE	WD1600JD	160G	SATA
Western Digital	Cariar SE	WD1600JS	160G	SATA
Western Digital	Cariar SE	WD1200JS	120G	SATA
Western Digital	Cariar SE	WD800JD	80G	SATA
Western Digital	Cariar	WD1600AABS2	160G	SATA
Western Digital	Cariar	WD800BD	80G	SATA
Western Digital	Cariar SE16	WD7500KS2	750G	SATA

Western Digital	Cariar SE16	WD5000KS2	500G	SATA
Western Digital	Cariar SE16	WD4000KD2	400G	SATA
Western Digital	Cariar SE16	WD3200KS2	320G	SATA
Western Digital	Cariar SE16	WD2500KS2	250G	SATA
Western Digital	RE series	WD5000ABYS	500G	SATA
Western Digital	Caviar Green series	WD20EADS	2T	SATA
Samsung	/	HA101UJ/CE	1T	SATA

Note
Slight difference may be found in user interface.
All the designs and software here are subject to change without prior written notice.
If there is any uncertainty or controversy, please refer to the final explanation of ours.
Please visit our website for more information.